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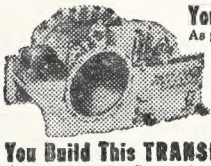

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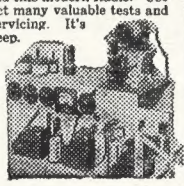

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WE'RE going to talk about the big race this time. Not the race between the government-bound scientists of the so-called "free" nations and those enfolded in the so-called "iron curtain." Not the race to reach the moon and the neighboring planets, which is very much on. No, not even the forthcoming political races in England, the United States and other nations.

The race we're going to talk about is the biggest race of all—one whose outcome must vitally affect the existence of every man, woman and child alive upon this earth today—and all the billions yet to be born.

It is the race between mankind and his scientists—for in the sudden snowball of scientific advance, whose ratio has proved to be geometric rather than arithmetical, our scientists have ceased to be mere campus theorists or convenient gadget-makers and have become the purveyors both of a Utopia for which most of us are woefully unready and of possible global annihilation.

Left at the Post

In short, we have virtually been left at the post, well-tangled in our several and various dogmas, prejudices, creeds and ideologies—glued to the starting blocks by our shoddily systematized limitation of vision.

Since it is non-scientific humanity that is basically at fault most of the cries based in anger and apprehension which we hear voiced almost daily are against the scientists, who are in no way to blame for the present parlous state of affairs.

We hear them savagely attacked as inventors and discoverers of as yet incredibly destructive forces which man may now turn against his fellows. This, although these weapons, A-bomb, H-bomb and the X-bomb and the like, are mere by-products of the complete liberation from material care which the unleashing of the atom actually portends.

We hear loud demands for some sort of scientific censorship. This, although it is as impossible to keep scientific discovery channeled in Pollyanna-ish directions as it is to grow vegetables without either weeds or crows or hydroponic difficulties.

Nostalgic Voices

More inane yet, we hear many voices from alleged intelligences demanding that we forget the whole business ever happened and return to some sort of ox-cart or at most trolley-car way of life. This, although such Savonarola-shouts demand not rules but time machines to return to a past we would almost certainly find impossible of adjustment.

Actually, in this last instance, the nostalgic voices are needless. For the chief trouble with the world today is that too many of our so-called leaders are still living in the trolley-car era, are hopelessly unable to adjust their emotions or their thoughts to the exigencies of the atomic age.

Many of the men in charge of public and human affairs in the great nations today, despite their flexibility and whatever talents they possess, are inherently as well fitted to meet and see clearly the forces and issues of an atomic era as Little Lulu is to express the emotional complexities of, say, Inrid Bergman.

And yet they are well ahead of most of us—or they wouldn't be where they are!

An Era of Plenty

Actually our scientists, merely pursuing their tasks, have got such a lead on non-scientific humanity that the latter is dangerously confused and frightened. Even in an increasingly overcrowded world it does not seem especially far-fetched to envision an era of unheard-of plenty—a sort of uni-

(Continued on page 8)

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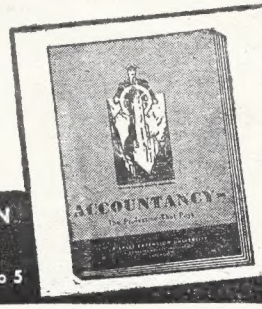

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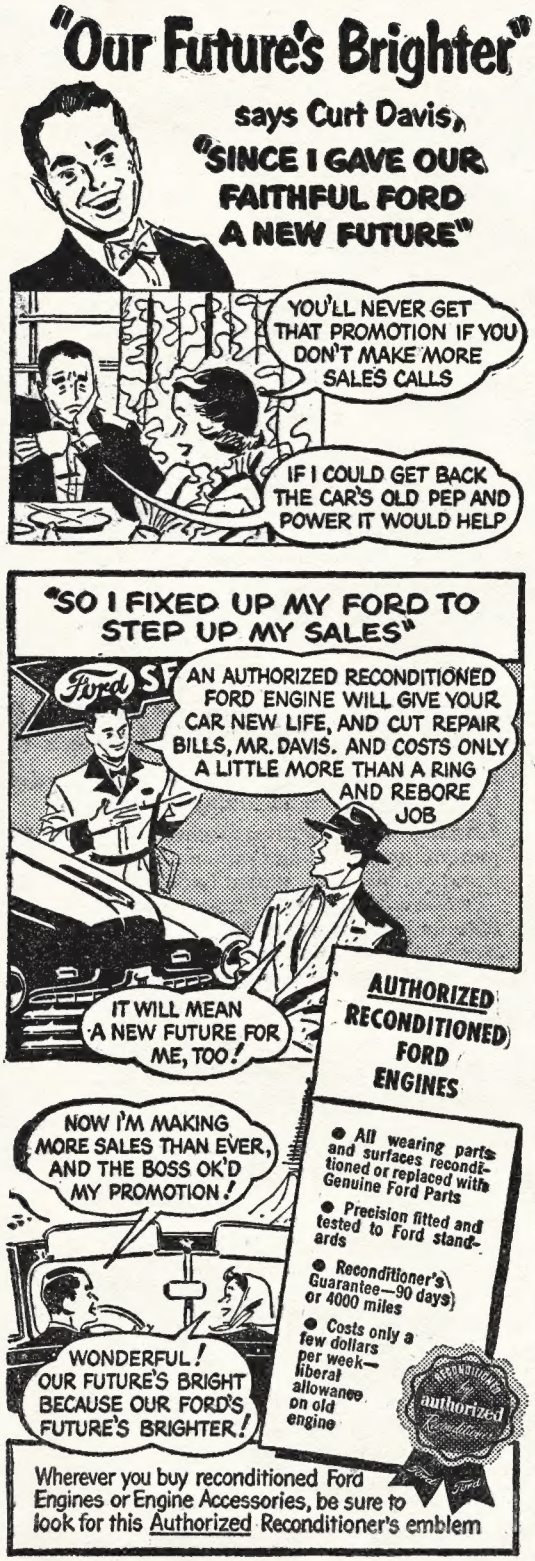
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THE ETHER VIBRATES

(Continued from page 6)

versal Platonic republic with machines and molecules serving as the necessary slaves.

Yet most of us so fear change that we can see science only as the instrument of final human destruction. As for its Utopian aspects, well the social, theological, political and other changes such a Utopia means —to say nothing of its effect upon the dividends of those ten shares of Old Gowanus Light and Power in the bank vault—cause us to shudder and turn our attention to the sports pages.

Humanity, to sum it up, is not nearly so afraid of its scientists and their discoveries as it is afraid of itself—and rightly so. For what we like to laugh off as "human nature" is actually our most inhuman conduct—our lapses into the beast.

So how are we going to catch up with the Utopia our scientists have laid in our laps —without knocking ourselves out in the process? Dictatorship is no answer—for it results in repression rather than the uninhibited growth we must have. And censorship will not work as long as human curiosity persists—which it will.

We'd Better Grow Up

It is our hunch that all of us have got to try to grow up and grow up fast if we are not to blow up instead. And in the meantime we must grit our teeth and hang on until the great race is no longer so one-sided in favor of science over human behavior.

For if we fail, we shall be faced with no mere period of uneven retrogression which some future historian can neatly tabulate and label a second "Dark Ages." We shall instead be up against a swifter and more complete oblivion than any historic man has ever known.

Therefore, it seems to us essential that we examine closely our faiths, our training and ourselves in an effort to find those elements in them that are outmoded, perhaps dangerous, in the shrinking universe of today. We'd better run like hell to catch up for there will probably be no place to run to if we don't.

If the world of today seems hopelessly complex and unsolvable for any of us—then it might be well to remember that it pre-

(Continued on page 140)

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THEN I'D BETTER SHAVE RIGHT NOW. I DIDN'T HAVE TIME THIS MORNING

BUT HOW DID YOU KNOW JUST WHO TOOK THE ENVELOPE?
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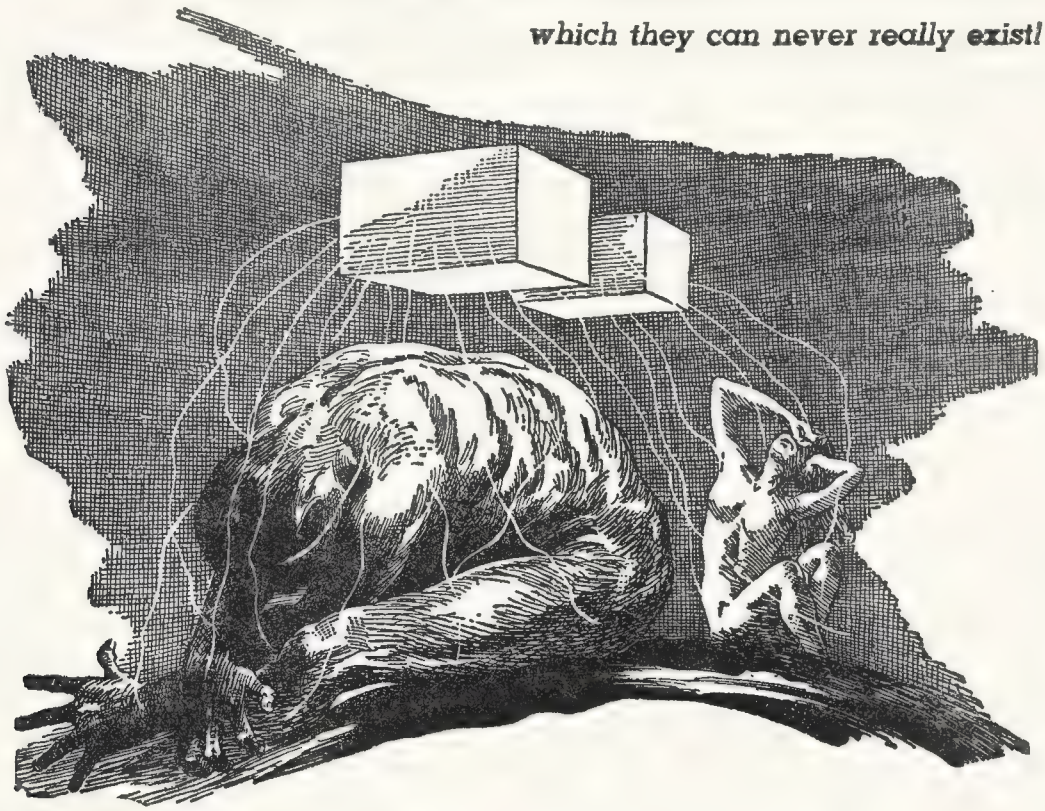

the Cybernetic Brains

CHAPTER I

Silent Screams

THERE was darkness and utter silence and the absence of any familiar thing. But he was alive. And that was good.

He had no right to be alive. The car had rolled down the hundred foot slope of Canyon Cliff to the river below. He recalled the slow lazy turning, end over end, the smashing, clattering impact as it came down on four wheels, then tipped sickeningly forward again, faster and faster—

He remembered the final plunge. He had been conscious even at the end when the shining foam of the river filled the car and shut

out all the world with its cold white cover.

And Martha—four hours his bride. Halfway down the mountainside she had been thrown clear. He remembered the glimpse of her face, not bruised or bleeding. Just white, deathly white with eyes closed. He remembered the terrible silence of her lips after the first scream of terror.

Now he tried to call her name but his mouth seemed numb and unresponding. His eyes made no response to light. He could hear no sound.

His pain was diffuse and terrible. There was so much of it that he could not tell from whence any of it came. Every nerve, from the remote extremity of his toes and fingertips to the most secret core of his brain, signaled pain. There was the pain of the knife and of fire, the pain of crushing, bruising, stabbing things.

They must have him doped with hypos, he thought. He shouldn't be conscious now except for the fury of the pain that had battered down the barriers against it.

He felt as if the nerve channels of his body had long passed their point of overload. They could carry no more currents of distress to his brain regardless of how much the stimulus of destruction piled up in the distant cells of his body.

And his brain could receive no more. It seemed burned and parched by the hot currents from far organs that cried out for succor and relief. The channels of reason were clogged with messages of hysteria.

And yet a part of him seemed able to think. It was as if he could somehow stand aside and view objectively the neural chaos that was within himself. He seemed capable of speculating and evaluating the vast damage to his body and mind.

It was only when he allowed himself to think of Martha that total collapse threatened the tiny sanctuary where reason was yet in control.

He was in a hospital, he thought. Someone must have seen the accident. He could not have remained in the submerged car more than a few minutes or he would have drowned.

But why didn't someone come?

He tried to call out again. His lips at first refused his bidding. With all the power of his being he forced them to shape the name of his wife.

"Martha! *Martha—*"

SHE would not be here, he told himself. She had been hurt too. She could be dead. The little cell of reason shrank within his brain as he gave way before that thought. If she had died life would be a meaningless unwelcome thing for him.

He moved his hands out from his sides to make sure it was a bed upon which he lay. He could not tell. The nerve channels, so clogged with pain, could not tell him whether it was a sheet or a stone upon which he lay. He moved his arms about in the air. They encountered nothing. But, with his damaged sensory apparatus, he was not certain that he had even moved his arms.

He struggled and called out again. *"Nurse!"*

There was no reassuring answer. There was no sound at all. Only the memory of sound. Deaf, he thought.

And blind. He tried to feel of his eyes, but he could not tell if there were bandages or not. It was like feeling with pillows tied about his hands.

He lay still for a long time, not moving, only trying to catch the sound and the feeling of his breathing, the beat of his heart. There was no sensation whatever.

It was like being imprisoned within a corpse, he thought. He could never go back to Martha, a senseless unfeeling scrap of flesh that somehow still lived. Even if they both lived he could never let her claim him. He wished he had remained in the wreckage in the river. It would have been better if he had died there. But now he did not want to die, no matter how broken and shattered his body.

Only he could not go back to Martha. He wished that somehow she would never have to see him or know his fate.

There, standing erect in the center of the laboratory, was Martha (Chap. XIX)

He could not think of her dead. She had to be alive. She had been spared the crushing fall down the face of the mountain. She could have lived, he told himself over and over again.

He wondered how long it had been since the accident. What might they be doing now if it hadn't occurred? Martha's brother, Al, had offered them the privacy of his family cabin in the mountains for their honeymoon. They had been on their way there when the car plunged over the embankment.

They might be boating now on the lake in front of the cabin, he thought. The moon would be full. In its light Martha's hair would shine as if with some phosphorescence of its own.

They had planned a supper by the light of a campfire near the water.

"If it gets burned a little or if sand and ashes get in it I'll have an excuse for your wife's first meal giving you indigestion," she had said.

He'd never eat that meal now, he thought. But at that he was luckier than anyone else he knew. No one else had ever held Martha in his arms and heard her say, "I love you, darling." Nobody ever would. That was enough to last him the rest of his life.

But it was wrong—about Martha not loving again. She'd have to learn to love again. She could not live her life with a memory. She would have to find someone who would love her and take care of her. She would have to marry again.

Her first love had been his. That was enough to last him a lifetime and no one could take it from him.

He tried to sleep, to push out the thoughts and the memories and the torrents of pain from his mind. But sleep would not come. He wished they would give him another hypo.

His bodily sensations seemed to be growing more numb and indistinct. He could not tell for sure if his eyelids were open or shut. Perhaps his butchered face had no eyelids, he thought. Perhaps no eyes.

He groaned aloud as an accumulating flood seemed to burst within him. He was alone and scared like a little boy lost in a darkness that would never lift.

He cried as the full flood crest of agony burst wide. His sobbing shook his being and fed upon the terror and the pain like ravening fire.

After a time, when it was over, he felt partly cleansed of the chaos and the fear. A wave of calm began to overlay his mind in the aftermath of the storm within him. He could sleep now, he thought.

But sleep would not come. He tried to retreat before the incessant activity of his mind. He tried to fade out the memories and withdraw support from his imagination.

There was no sleep.

He fought for it as if for a tangible possession that he prized above all else but sleep would not cross the barrier of his mind.

In panic and frenzy he finally gave way to cries and screams for the hospital attendants. They'd have to dope him to sleep. He'd go crazy without it.

What kind of a hospital was it anyway—where they left him without attention of any kind? He tried to think where they might have taken him.

On the trip he and Martha had passed through the little town of Dixon. They had a small hospital there. Or they could have taken him all the way back to Warrenton, the industrial center where he lived and worked. That would have been the most likely.

In either place he could have expected more adequate care and attention.

YET perhaps they *were* helping him. In his nearly senseless condition he would never know it. There might be a score of nurses and doctors about him now. They might have administered a dozen hypos. He would never have known it amid all the other pain.

Sure, that was it, he decided. They were watching him, taking care of him. He'd be all right—as near right as was possible for him to be. The hypos just couldn't beat down all the pain that was in him.

He imagined himself closing his eyes. He tried to draw a curtain of calmness

across his mind. And it helped. Something approaching a state of rest fell upon him. But he did not sleep.

He could not measure the passage of hours and of days but he felt that a long time elapsed while he lay a prisoner in his own corpse.

That was the only term he could apply to himself. The pain seemed to be dying away—not as if healing had come but as if the very nerve channels were at last burned away by the intensity of it. With the lessening of pain, however, there came no resurgence of sensation.

He lay still blind and deaf and unfeeling but he supposed he was being kept alive by intravenous feeding but he had no sensation of it. If they were sticking needles into his body they were probing a dead thing that could no longer feel.

There were only memory and desperate despairing thought.

He tried to mark the days against his imaginary time scale. He knew it was entirely fanciful. What he supposed to be a day might be only an hour in reality. But it seemed worth while.

It was on his fifth day of the darkness and the silence, according to his own tabulation, that he first noticed a change.

Light. It would have been imperceptible except that his visual nerves had been dormant so long. They responded violently to the first quantum that stimulated their sensory endings.

He almost cried from the joy of that first feeble perception. It was like the faint moonlit cast of a snow laden sky at night. But it was light, an incredible avenue of release from the sightless prison that held him.

He watched it grow in brightness. So slowly that sometimes he wondered if there were any change at all it increased. Over the days it brightened and swelled and grew and slowly became an image.

It was when he first detected some vague motion that he knew his sight was actually returning. It seemed to be the figure of a man but it was beyond recognition.

And then it was cut off as if a bandage had been wrapped about his eyes suddenly. He wondered what had gone wrong. He asked questions but the same impenetrable silence shrouded him. He got no answers. He heard no sound.

The light came back after a day—as suddenly as it had been removed. But this time it was clear and sharp. It was vision as perfect as any he had ever known.

Directly before him was a familiar and friendly face. Al Demming, Martha's brother—Dr. Albert Demming, the noted cyberneticist. He was looking directly into his eyes and his face was drawn and troubled.

"*Al!*" he cried. "Al, tell me what has happened! Is Martha hurt? Al—*Al,* can't you hear me? Al, look at me! Tell me about Martha!"

His voice had risen to a shrill cry but Albert Demming was turning away as if he had not heard a word—as if he had not even seen anyone before him.

"Al! Don't go away. Talk to me, Al. Tell me—"

He tried to turn his head and his eyes to follow the figure of the retreating man. He could not. He could only stare directly in front of him, helpless to move even his eyeballs.

For a moment despair mounted to its former peak. Paralysis—paralysis of even his eye muscles. But he *could* see. They must have repaired some of the damage to his eyes. If they could do that they could give movement to his eyeballs and restore his other muscles. It meant they were working, helping him.

He didn't understand the strange action of Martha's brother. It could be doctor's orders, he supposed. Perhaps they had told Al not to disturb him. That was why he had turned and walked away so suddenly.

Al had come because Martha wanted to know about him. That was it, he decided. The thought made him feel good. He had tangible evidence that she was alive and safe.

Then his eyes concentrated on the scene before him. It was a strange thing, a huge board covered with inscriptions and meters and pilot lights. He stared at

it and read the inscriptions. They were chemical formulae. He was a chemist and he understood them. He understood the intricate and complex biochemical process that they described. He had developed it.

Slowly a surge of terror began mounting in his brain as he continued to stare at that board his vision could not avoid. Helplessly a scream burst suddenly from within him.

He knew now where he was.

It was no hospital.

He screamed again and again and he couldn't stop. Only when consciousness left him did the screaming die.

CHAPTER II

The Hennigers

DR. ALBERT DEMMING was a blond massive man with startlingly blue eyes that safely guarded the secrets of the mind that lay behind them. As Chief Cybernetic Engineer it was not his duty to supervise personally an individual control installation. But General Biotics was something special.

He did not dwarf Thornton Henniger, Chief Steward of General Biotics. Henniger matched him in height and thickness of chest—and in instinctive dislike.

They stood on the narrow control room balcony with their backs to the windows that overlooked the thousand-acre plant. In the center of the chamber before them was visible the fifty-foot control central with its sterile glass walls. In the exact center of this chamber, amid the mass of machinery that it held, a platinum box no more than half a cubic foot in volume rested upon a supporting pedestal.

The men's eyes were on that box.

"I did not know—until yesterday," said Albert Demming. "That's why I called you. I am powerless to prevent this in the face of the contracts the Institute holds, which John and Martha signed. But you, as Steward, could release them to me. I'll guarantee you an installation equivalent in every respect. Will you release them?"

Henniger moved his cigar from between his teeth. "We've waited five years for such contracts. Why should I release them now? The Institute is obligated to release no contracts except upon request of the original signers. They are dead. You have no claim. And you talk strangely for a cyberneticist."

"I have a claim," Al said flatly. "The woman was my sister. John Wilkins was her husband. They were killed eight days ago on their honeymoon."

Henniger watched the tightening around Al's mouth. "You have no claim," he repeated. "I sympathize with your personal loss. I knew of Martha and John Wilkins, but not of your relationship to them. I would have thought the Institute would have sent someone else—but I suppose the magnitude and uniqueness of this installation demanded your personal attention.

"You know the history of this plant. It has long been the desire of Biochem to centralize the production of biotics in a single cybernetically-controlled plant. Up to now it has been mathematically impossible. We have finally discovered the means through the coupling of two units."

"*I* discovered the means," Al interrupted sharply. "It was *my* theory that such an installation could be made. I demonstrated the proof of it. That's why I'm here. That's why I have the authority to say that I can guarantee you an equivalent installation if you release these contracts to me.

"Martha was my sister and I went to school with John. I have claim on you because you would still be working piecemeal in a score of duplicate structures if it were not for what I have given you."

Henniger's eyes narrowed as they turned penetratingly to Al's. "You have no claim!' he repeated. Each word was clipped short and heavy, like a blow with his fist that he knew he was delivering without mercy beneath Al's unprotected heart.

"I see," said Al. His voice was barely a whisper.

"I trust that you *do* see. I still think the Institute should replace you. Such sentimentality as you express is useless to your dead relatives and to you—and it is harmful to me. Your technical work is bound to suffer and if I detect any evidence of it I shall request the Institute to replace you. I am sure the Institute Board would not be at all happy to hear about the proposal you have just made me."

"The technical aspect of this installation will be adequate," said Al thinly.

"Good. Then we'll hear no more of sentimental matters. I want to know more about this adjustment collapse of which you speak. I have not seen a new installation before. This collapse seems to me a dangerous thing. If it can happen once why can't it repeat?"

Henniger searched Al's face for the merest trace of a break but the cybernetic ist's eyes controlled the churning emotions behind them. He spoke with sharp, technical precision.

"We have no adequate explanation of the collapse. I have spent most of my research on this particular aspect of cybernetics but I have nothing to release. We know that when the brain is first stimulated visually or otherwise there follows a period of complete neural dissociation as if all synapses are suddenly dissolved.

"The technique has been to overcome this by a gentle electronic forcing that clears this block and realigns the synapses in desired patterns. Once established this forcing pattern is maintained. There is no more block and our oldest cybernetic installation of this type is nearly seventy-five years old now."

HENNIGER looked down at the small box behind the glass walls —the box big enough to hold the brain of a man.

He removed the cigar from his mouth again and held it in the hand that rested against his thickening paunch. His lips parted in the humor of a gargoyle.

"Seventy-five years, eh? Wouldn't it

Dr. Jurgens looked at the platinum box in silent speculation (Chap. X)

be a hell of a thing if it turned out that they were alive? Imagine a man locked up in that box—he could live forever, I guess, couldn't he? That is, if he didn't go crazy first."

Al's face was a white mask. Henniger glanced and turned hastily from him. "Sorry. I forgot. Kind of a rugged thing to be joking about anyway. Sorry, Demming."

He stuck the cigar back in his mouth and resumed brusquely, "You say this installation should be operating satisfactorily within a week now?"

"Yes, it will be functioning within that time." Al's voice was only a whisper of sound. The Steward of General Biotics shifted uncomfortably. The depth of emotion he sensed in the cybernetic ist was beyond his capacity.

"I'll be in tomorrow, then. I want to see how you remove the collapse."

Al watched his broad blunt back all the way to the end of the balcony and down the iron stairways that led to the lower levels.

He had made a grave mistake in supposing that an appeal to Henniger would have any effect, he thought. He had forgotten why a man like Henniger was not among the ranks of the non-workers. He had forgotten that in a world where no man was required to labor, men like Henniger chose to work because it was their only source of power.

There was probably no man alive who understood all the engineering and processes of General Biotics. Its components had been so long under cybernetic control that such men had died without finding successors.

To Thornton Henniger, who understood it least of all, it was a badge of power, Al thought. Though the Steward could not have described the processing of a single one of the thousands of compounds that the chemical giant produced, yet he could say yes or no to the installation of the revolutionary dual cybernetic control that Al had designed.

Why could the Hennigers drive themselves into such posts of authority? There would never be an answer to that until men became angels, Al supposed. The public seldom heard of the Hennigers, seldom saw their faces. They didn't need to. His kind were men elected by the men elected by the people.

They were like second order invariants. The whims of the populace changed and swept new officers into powers. But always the Hennigers seemed to know the people elected by the people.

Al turned away and moved slowly down the steps to the main floor. He approached the double-locked doors of the glass-walled central. Inside he passed between the maze of equipment and machinery that served the control within the platinum box.

His face worked in bitter lines as he sank down on one knee before the bank of equipment beneath the box. All the agony of his own despair closed upon him. He choked helplessly upon the throbbing that rose in his throat.

The technicians outside could see him. He dared not let them glimpse his face. He pretended to examine the pulsing heart of glass and platinum that kept the flow of nutrient surging through the arteries that had held the blood of a man.

"John—John—" he whispered.

He whirled at the sound of tapping on the glass wall. Outside, the pixie face of Kit, his wife, was grimacing at him. She was smiling then but the smile vanished as she glimpsed his expression.

She squeezed his arm as he let her in. "Al—you look sick. Why don't you turn this over to someone else?"

"I can't, Kit. I've got to be near—them."

SHE hesitated. "You turned on the visual today?"

He nodded. "John. It was just like the rest of them. I set the initial stimulus as low as possible. Then I turned on the focused observation image of the control panel. There was the usual moment of renewed response until it went wild and collapsed. There isn't a doubt any more, Kit. It wouldn't do that if they weren't alive!"

His arm closed tightly about her shoulders, pressing her small dark-

haired head against his shoulder. She turned her face up to his.

"Darling, I can understand a little of how it must seem to you because you have helped put them there. But you'll be sick with your worry. You can't help what has been done. You can do something to put a stop to it in the future—but not if you kill yourself with worry."

"In a few more days I'll have to turn on the visual excitation for Martha. I can't do it, Kit! Think of her! She knows something terrible has happened to her. She's blind and deaf and without sensory mechanisms of any kind. But she has every reason to suppose that she is being cared for.

"Then when I turn on the visual stimulus and let her see the guide panel she'll know. She'll know that she is wholly lost and abandoned. I'll have to find some way to kill her rather than let her endure that. John too—"

"No," said Kit. "Not that—as long as they're alive there's hope of some kind."

"Hope! Blind—deaf—dumb—beyond all human touch forever—what kind of hope can you find in that? I've got to find some way to see that they die mercifully and quickly."

"They have sight. If you're careful you can communicate by printed messages. You can let them know you understand."

"What use would that be to them—if it were possible? What hope or comfort can we offer? They could give no response of any kind. They know they are slaves—a part of a machine. They know there is no escape but death. Do you think I *want* to kill them? But they might live ten lifetimes if I don't. There is no other answer."

He bent over, resting his hands upon the guardrail about the controlling center of this vast chemical plant. Kit reached up and stroked his hair with her small gentle fingers.

"Perhaps you're right," she said softly. "Martha would want it that way. She could not endure decades of such imprisonment without going insane. She'd want to go quickly if she knew. But"—tears started in Kit's eyes—"she was Martha. As much my sister as yours—"

Al raised his eyes to survey the scene about him, the score of technicians intent on their jobs of installing the controls for the vast flow of materials through the plant. His gaze encompassed the shops and factories and laboratories that formed the whole expanse of General Biotics.

"Somehow," he said, "somehow there has to be a way to smash the whole concept of cybernetic engineering as now practised. In the world there are more than two million brains—men and women with life and feeling and human souls—more than two million of them imprisoned like John and Martha. What a cry they would raise to heaven if they could speak for an instant!

"Nothing can be done for them but we can smash the system that would imprison millions more. Somehow it has to be told that these are living beings—not the dead brain cells that cyberneticists have so long believed."

"They'll fight," said Kit. "Men like Thornton Henniger. What would he do?"

"He'd kill me for even thinking such thoughts."

"How can you tell them? Where will you go?"

"The Institute, of course. They'll believe me. Men like Dr. Jurgens and Ryberg. If they thought for a minute that this were true they'd bring a halt to cybernetic brain installations.

"But I have to be sure of my position. The responsibility of a brain lies with the engineer. One failure would endanger my position and my chance to be heard. If both the brains on this first dual installation should be destroyed—I don't know how I can kill Martha and John without endangering my chances to attack the whole system."

"Then wait," said Kit. "I can't believe there's no way out for John and Martha. I can't think of them being dead. Somehow you can find a way to do something for them."

Her hands were gripping his arms fiercely. Her head bent to rest upon his shoulders as tears renewed themselves in her eyes.

"Sure, Kit," he said softly, "we'll find a way. Tomorrow I'd planned to try something on John that I've never done before. I'm going to increase the power of the electronic forcing to break down his block. At the same time this should serve to diminish destructive neural feedback and circularity of thought.

"It should increase his peace of mind —if he can know such—by eliminating the kind of feedback that produces neuroses and psychoses. It may spare him a great deal of agony.

"Eventually, there's no reason why we should not find a way to give them a voice. Then they can say for themselves what they would have—death or such existence as is possible to them."

CHAPTER III

What of Martha?

IT was Martha's hair that he was remembering when consciousness returned. He was remembering the fragrance of it and the soft touch of it against his face. He remembered how it was to hold her head against his shoulder and gather up the long golden threads in his fingers and kiss the white slope of her neck.

He wanted to remember for just a moment, to hold back the catastrophic flood of more recent memories before he wrestled with them and felt their torment twisting his soul.

Martha was tall and her beauty of the kind sometimes called handsome in a woman because she had none of the diminutive fragility that was Kit's.

"We Swedes had to be big," Al used to say, "in order to get the world civilized."

John Wilkins was—had been, rather, he thought grimly—framed more sparingly than the Demming Swedes. His eyes had barely leveled at Martha's height and his body seemed fueled with pure energy.

Like him Martha was a worker and a biochemist. He had courted her amid the incredible odors of synthesizing animal products. He shuffled through memories, affixing them carefully that they might never fade—like the filling of an album.

Martha, white coated, frowning through an encompassing maze of glassware in which refractory molecules refused her their secrets.

Martha swimming, her body golden and glistening in the sunlight.

Martha walking with him, her long-limbed stride a flow of grace and tender loveliness.

Martha standing solemnly and fervently beside him, whispering the brief words of their marriage ceremony.

Martha, whom he would never see or hear again—

It spilled over, that accumulated flood, and choked within him. But now the barrier that bore against it seemed stronger and higher. He could look upon the dead lost memories and upon himself and know himself for what he was —and he could still feel a magic circle where rational thought prevailed, into which he could retreat before the flood.

Deliberately he put away the memories and challenged the present. He took out the thought of what he now was and let it possess his mind. His reason stood up before it.

He pictured the naked cortex of a brain, a grayish-white wrinkled thing shot through with strands of capillaries. That was his embodiment. All else had been sheared away. Only the thinking living core of him remained.

But he shouldn't be living. He had died in the plunging wreck on the mountainside.

He was a brain. A cybernetic control brain. And cybernetic brains were dead things. How could he be living?

He did not know but if he lived then they all lived—all those millions like him, he thought. For three quarters of a century the neurons of dead men had been robbed to serve a society where men survived by the labor of their machines that had relieved human hands of all obligation.

And, with them living, this civilization was a pious congregation in whose church an undead vampire slept beneath the stones.

His pain diminished somewhat, as if the nerve channels had burned themselves out. He understood its source now. Severed by the knife that had removed his brain from its skull, his nerve endings cried out with the sensations of organs that no longer existed. They gave ghostly testimony of a pain-ridden body he no longer possessed.

But they were dying, healing over now, just as all the rest of him was healing in the decaying mold of earth. All but the brain of him, the core that held the life and being that was once known among men as John Wilkins.

He remembered that moment when knowledge had come, when the blast of recognition had been more than his synapses could endure. He knew he had blacked out in the face of that unbearable understanding. But now it seemed like a far away dream that was not of much consequence.

Cybernetics! The god-name of the age. The deity of the Welfare State.

TEN thousand times the word had been upon his lips, the name of a science, the miracle worker of this day in which he lived. Cybernetics had made men free again—all but those like him, who lived unsuspected and enslaved now forever in terror and darkness, in silence and lonely agony.

Cybernetics. It was the science first defined nearly a half millennium ago by the great mathematician, Wiener. With his colleagues, Wiener had shown the startling parallels between the functioning of the human brain and the machines of man's invention.

They pointed out that the microscopic neurons of man's brain functioned like the gross vacuum tubes of his computing machines. That the study of neural activity is the study of communications engineering, an inquiry into message transmission, noise, coding and relaying.

It had been only a step then—though one of prodigious magnitude—to the present formulation of cybernetic engineering. If those early pioneers could have seen this day—if they could have known what John Wilkins and two million others knew—surely they would have turned aside from that terrible course upon which they had set.

But who could have known? There was no cyberneticist in the world who would have believed that John Wilkins still lived, that any of them lived.

In ages past men forsook the forests and fields for factory dungeons where the dark clanking hulks of machines were hailed as the liberators, the untiring, uncomplaining slaves of mankind.

It was only when it was far too late that it had been discovered there was error in the identity of the slave.

Tired generations served in their prison houses and died believing they had witnessed the upsweep of civilization.

[*Turn page*]

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But the servitude could not endure forever when men witnessed, generation after generation, only the silence of their false gods.

Their eyes opened and they saw who was the slave and who the master and they dared not rebel, for there was existence only in the slavery that they had always known.

Cybernetics was the white goddess that turned the tables and again made the master the slave. Cybernetics put the machine forever under man's control and released him from its chains. His hand was no longer bound to the levers and the wheels. His voice alone could command the machine for long years of toil and the machine would obey without faltering.

John thought of that historic day more than four centuries ago when the first completely automatic automobile factory had been put into operation. Television screens showed the world the momentous magic of raw materials being turned into finished vehicles in the giant factory where there was not the breath of a single human being. Only the hand of the white goddess, cybernetics, had touched those machines.

Outside, fifty thousand displaced workmen watched grimly. They were not yet ready to give thanks for the great blessing of release from their slavery. They saw only that their master had been defeated and could supply them no more with food and houses, for which they had endured his whip.

They stormed the plant and when they were beaten back two thousand of them lay dead.

It was hard for a time but not nearly so hard as it might have been—for men were dreaming even then of the perfect Welfare State. It was just that they had not yet seen that cybernetics was the key to the ultimate perfection of their goal.

Two centuries after the first automatic factory the true Welfare State existed in reality in the two Americas. It took only half a century more to encompass the world.

There were only a comparative handful of men who ever knew that it almost broke down during that third century of its existence. They were the cyberneticists who still retained some understanding of the machines they had built.

In Wiener's generation it had been known that there is a limit of size which controls the functioning of any form of organization. In nature as well as in human engineering there is always a top limit of size beyond which a structure or organization cannot go without breakdown.

In trees it is the mechanism of supplying water and food from roots to leaves that says the plant can be so big and no more. In animals it is the legs, which must support the weight of the creature. In buildings it is the area occupied by elevator space that makes it impractical to build beyond a certain height. And beyond some great but definite span any structure will collapse under its own weight.

In cybernetics it was the accuracy of function that could be maintained in the massive control instruments.

Computers that did man's thinking had become unwieldly cubes a thousand feet on a side, filled with millions of vacuum tubes relaying countless orders.

This was the problem that confronted the early cyberneticists of the Welfare State. Machines had grown with the swarming population. Factories had become so vast and the cybernetic control problem so acute that they threatened to break down, carrying the short-lived Welfare State with them, placing it in history as a unique but tragic experiment—and forcing man back to his labor.

But for four hundred years it had been known that the neuron of the human brain performs vacuum-tube functions.

When it became necessary the cyberneticists bridged the gap that substituted one for the other.

JOHN knew the history of that work. He had heard it often from Al, who worshiped his science with fanatical intensity.

There had been some opposition, both technical and moral, but both had been overcome quite easily. The technical problems had been the most difficult.

The public had long been used to such institutions as blood banks, eye banks, the storage and transformation of parts of human bodies. They became accustomed to the use of a human brain as part of a machine.

The first was the brain of a brilliant young physicist who had been killed in an accident. Only the day before he had expressed a wish that he might take part in just such an experiment. His wife gave permission for the use of his brain.

It had worked. It was still working. That human brain, no bigger than a half gallon jar, had replaced one of the thousand-foot cubes of the electronic machines.

For seventy-five years it had functioned as a vast and complex relay in the merciless machines that drove it and were driven by it in order to solve the problems of industry and commerce.

John remembered the name of that physicist—Carter Marien. Its strangeness had stuck in his mind. He thought of Carter Marien.

Seventy-five years a prisoner in hell.

They were dead, the cyberneticists said from the beginning. The activation of the neurons was no more than the jerking of a dead frog leg by an electric current.

But what they had never learned was the nature of life and thought itself. They didn't know that their activation according to the requirements of cybernetics was the equivalent of the preservation of life in these neuronic channels.

The cyberneticists themselves would have been the first to grasp the horror of what had been done. But they couldn't know. No one could tell them. The mute prisoners of darkness could never tell. They could only live—and hope for death.

John's vast pain seemed to be receding from the shores of his mind like some turbulent sea drying beneath a parching sky. The narrow retreat into which reason had fled was expanding, taking over the areas that had been burdened by torment. It was a sense of growth, of wellbeing and of peace. He didn't understand it but he welcomed it and was glad.

Only the thoughts of Martha served to shatter the peace that seemed within reach.

They had signed contracts with the Institute of Cybernetics together. They had made the whimsical stipulation that their contracts could be sold only as a pair. That meant that if she had died she was somewhere in the giant properties of General Biotics. He knew that's where he was by the formulas on the control chart. His process. Biotics had it.

He remembered the heavy, smug face of Steward Thornton Henniger, who had happened in the Institute the day he and Martha signed.

Henniger had laughed heartily with them. "My new employees! I've got an option on your contract, you know, and I'd double that contract price if I thought it would put you to work a year sooner. Our control has been waiting for five years for contracts like yours."

"Better not wait for us," Martha had laughed. "You'll die of old age. We intend to retire to a villa on Mars at ninety."

"Now look, you take good care of my property," warned Henniger jovially.

Before the accident John hadn't thought much about the fact that the Institute of Cybernetics was extremely happy to receive such contracts as his and Martha's. The cyberneticists themselves professed not to understand it fully but it made a difference, the kind of brain that was placed in an installation.

One who had worked in chemistry all his life, as John and Martha had done, was a far better subject for control of a giant chemical plant such as General Biotics than was the brain of a nonworker. The expert's brain could relay a far greater volume of control signals.

Conditioning of neural patterns and synapses, the cyberneticists said. It sounded very good if you didn't know

that the brains still lived and carried the soul of a man within their cortex.

He'd have to find out about Martha. He had to know if she had been imprisoned too. But there was no conceivable avenue of communication with the outer world.

ALL the cries he had made during those first days, the screams he had uttered when realization of his fate overtook him—all that had been nothing but neural activity in accustomed patterns. There had been no sound, no sound at all, because he had no voice.

There was nothing he could do to convey a single thought to the outside world. No movement he could make, no sound he could utter.

Most of the prisoners must be mad by now, he thought. Years of solitude and sleeplessness—he knew there would never be sleep again for him. The chemicals that nourished his brain did away with the necessity for it but they did not wash away the fatigue of despair.

Yet the sense of growth and stimulus of mental activity was increasing. Of itself it created a kind of panic because he did not understand it. He knew he had no right to any sense of peace. Madness and panic were the only normal states of a mind in such desolation.

But somewhere within the far depths of his brain, so infinitesimal that he thought it must be only the sudden firing of a single neuron, a mighty sense of inevitable destiny seemed to be taking form. It whispered a thought that he struggled to reject but it grew.

There was an answer, he thought. He knew not when nor how but someday he would be free of this prison. He was not helpless enough. It was not strong enough to hold him forever. He would break free and smash the system that towered upon the rotten foundation of slaves. If one man were to be a slave, then all must be—or else freedom for every one.

They could go back to the electronic controls that had once broken down. It would mean that men would have to work again—a few scattered hours of their lives—but they could submit.

And they *would* submit. Who would hesitate when he learned of the fate to which his luxury condemned a loved one or a friend? Who could think soberly of a son or a husband or a wife imprisoned for eternity in the tiny platinum box of a cybernetic control?

It would have to be done with care, he thought. The public revelation could not be abrupt or without preparation. If it were, the whole structure of machines as well as controls might be set upon and destroyed by angry mobs.

There would be a slow orderly replacement and gradual public education. The transition could be made smoothly if it were planned carefully.

His own plant had not yet been shifted to his control. He understood a little of the process by which instructions passed from a complex magnetic tape to a reader that passed them on to the brain. In turn, the brain, through hundreds of thousands of feedback circuits, would perform relay functions to execute the instructions on the tape, just as millions of vacuum tubes had once done.

He wondered what it would be like, that stimulus from the tape reader. He wondered if he would sense it as pain. He wondered if he could control it voluntarily—cause disturbances in the processes by the exercise of his own will. That didn't seem possible. Others would have done it long before him. They would have destroyed their machines in wild rebellion.

A sudden shift in the monotonous scene caught by the orthocon cells drew his attention. Someone had come into view before the panel. His back was toward the cells that gave vision to John's brain but John would have recognized that broad back and blond mane anywhere.

It was Al again. He was doing something to the panel.

INSTINCTIVELY, John made an attempt to speak, to call out to Martha's brother. It was done before his new knowledge could cancel the impulse.

He sensed the neural commands going out—to organs that weren't there, to lips that would remain forever silent. And the burden of disaster seemed to burst anew in his mind. Forcibly he shook it off, seeking the advantage of the new growth and well-being that had come into reach.

Al turned then. His eyes looked directly into the orthocon cells as if he were looking into John's face. For a moment John didn't comprehend. It gave him the sick feeling of looking through a window behind which he would remain forever invisible.

Then he saw what Al had been doing. Fastened to the panel was a sheet of paper with typewritten words. John looked at Al, sensed the sudden pleading that was in his eyes. Al's throat was working, his lips half moving as if he could not hold back words that fought to be spoken.

He focused quickly upon the paper that hung upon the panel. His vision caught at the first words.

I know that you are alive, John.

"Al—Al—" He didn't try to fight the impulse to cry out. He felt the sensation of hot tears though he had no ducts to bear them.

"Martha—tell me about Martha, Al."

He read the words again:

I know you are alive, John. I have suspected for months that the cybernetic brains still live but I dared not present the theory until I was sure. That's why I tried to persuade you and Martha to cancel your contracts.

I never dreamed, however, that anything like this would happen so soon. I don't know yet what I can do for you. But I'll find a way out for you, John. I swear I will. Be patient and trust in me because I know that you are not dead.

I'm going to the Board of the Institute. My data is complete. You've heard me speak of the adjustment collapse. Now you know what it is—the shock of recognition that your mind cannot endure. And it is proof of life. The electroencephalograph charts show it.

It will not be easy to convince the political and economic members of the Board, but cybernetic brain control must be abandoned.

Perhaps you don't want to live, John. I can't imagine what your feelings must be but somehow I'll find a way to give you a voice. If you want to live for as long as you can I'll try to make that living bearable. If not, the nutrient controls are easy to shut off.

I hope it is some faint comfort just knowing that you are not alone and abandoned as all the others have been. Martha—

Al suddenly snatched the paper and crushed it in his pocket. He turned and busied himself at the panel. The name of his wife burned in John's mind but he had not read what Al had written concerning her.

He cried out impotently, "Martha—Al! I didn't get through. What of Martha?"

He saw then the figure of Thornton Henniger. His vision grew blurry with unreasoning hate. He remembered that day when Henniger had said, "I'd double that contract price if I thought it would put you to work sooner."

But rage was not the way out, he told himself. It subsided in response to his self-command. He had no right but he felt a crazy elation, a power and a freedom that he had never known before.

There would be a way out, he thought, and he believed it. It would take the working of a miracle but he was not alone any more. Al would help. Together they would find the strength to work that miracle.

CHAPTER IV

High Policy Murder

THE Institute of Cybernetics was housed in a gray windowless block within the city of Warrenton. To Al it always looked like one of the cubes that housed a cybernetic brain, a cube ex-

panded to a million times normal size with control cables extending to all the world.

Now, as he approached the building again, he felt how terrifyingly accurate the analogy was. Under governmental authority the Institute held complete domination of cybernetic work in all the world.

The Institute alone had authority to make contracts with individuals who wished to offer their brains for cybernetic use after their death. Only the Institute could release these contracts and the only recipients could be the government authorized plants which manufactured the world's goods or carried on other licensed activity.

Chill gray dawn filled Al with a kind of apprehension as he looked up to the expanse of those walls that housed the control center of the Welfare State.

Welfare State, he thought bitterly. Perhaps it was no worse but certainly it was no better than the endless succession of dreams that man had dreamed since the beginning of time.

He didn't pretend to know the answer and he felt sure that no one else knew it. But he knew the philosophy of his time was a shallow thing, compounded of indolence and surfeited appetites. The right to subsidy which entitled a human being to the abundances of life from birth to death had not inspired depth of thought or broadness of comprehension. Each year there were fewer young people who chose to be workers upon achieving their independent subsidy.

The one thing that might have saved the race from its present plight was interstellar exploration and colonization. But that feeble hope had been slaughtered by its monstrous siblings—for it too had been born in the same generation with cybernetics and the Welfare State.

Men had reached as far as Pluto and for two generations or more there had been progress. A half dozen futile colonies had been planted, one on the Moon, two on Mars, three on Venus.

But that was all. Four or five ships a year still went out but the voyagers were regarded as rather atavistic and somewhat stupid. The Welfare State had smothered whatever it was that made men look up to the stars in the first place.

Instead there were such fantastic things as the current ridiculous Society for Artificial Dangers, which was springing up in all sections of the land. They typified the things that men would do with workless hands and unobligated minds.

It would be a good thing, perhaps, to jolt these minds, he thought. To shock them with the realization that cybernetic brain control was through, that there would have to be a permanent labor force many times the total now available in order to care for the electronic controls. Maybe they could be recruited and rotated by legal procedure. He didn't know and he didn't care.

IT was a sick system. He had never known any other, but history told of better times, times when a man had to do more than open his mouth and hold out his hands to have them filled. He sensed the possibility that his revelation might eventually mean the collapse of the Welfare State. If so it would be but the end of a wretched system of unearned leisure and wasted humanity.

He shuddered in the cold drizzle that had started and drew his coat tighter. Few were walking on the surface today. Most of the citizens preferred the warm luxury of the subway walks and gardens and swift cars that would take them effortlessly from building to building.

He crossed the street with head lowered against the wind and entered the Institute building. Inside the pleasantly perfumed air and the spacious garden of the central lobby were like a different world. A score of workers of the Institute were at ease about the garden.

Al waved brief greeting to the group, ignoring the smiles of those who glanced at his coated figure and turned down hat. Even they considered anyone out on such a day an eccentric.

In his own suite of offices and laboratories he found two of his six-man leadstaff already at work. Ross Carl,

head of the group, and Mahlon Folger were young, serious and imaginative.

"Board's been calling you for the last ten minutes," said Ross. "I didn't know they were meeting today."

Al shrugged out of his coat. "Neither did they—until late yesterday. I called it. But I've got another ten minutes. They can stew."

The two assistants, standing in the doorway of his office, looked solemn. "You're putting our research on the table this morning?" said Ross.

Al nodded. He moved to the desk and arranged the papers he needed. He looked up at them momentarily, his hands resting on the desk. "I don't mind telling you I'm scared," he said. "There's no telling what kind of explosion may result."

"You ought to know something I just came across," said Ross hurriedly. "I didn't know about the meeting or I would have spoken to you before, though I wasn't sure until last night."

"What is it?"

"Records—I was down there looking for something else and I found evidence that every contract with Board members had been canceled. There doesn't seem to be a single one in force any more."

Al stared at him.

"It *could* mean they know."

"When were these cancellations made?"

"About three years ago—all within a couple of days of each other."

"*That* long!" Al whispered. "And they've done nothing if they really do know—"

"Wouldn't it be better for you to wait?" suggested Mahlon. "They could even know more about it than we do."

"We've already waited too long," Al said bitterly. "I learned whose contracts General Biotics are using—Martha's and John's."

"I'm sorry," murmured Ross. "I guess we did wait too long."

"As a precaution," said Al, "I want you to gather every note and scrap of data pertaining to this research. While I'm up there you take it out to my house and tell my wife to hide it in my study. If there should be any attempt at suppression we'll make ourselves heard elsewhere. They can't do worse than throw me out of the Institute if they don't like what I have to say."

"We'll take care of it," said Ross. "Good luck."

The Board was composed of three separate sections. There were representatives of government who knew nothing of science in general or cybernetics in particular. There were economists equally ignorant of all but the planned flow from the cornucopia of the Welfare State. And there were cyberneticists, chiefly older administrators who had done good research in their youth.

These sensed little of either the political or economic force of their work. They chafed under the incessant pressure from their fellow members that held them from fantastic experiments they would like to have performed with the materials at hand.

Dr. Albert Demming was a unique species on the Board. He had done enough research to qualify him for highest standing in the scientific world. And he had done enough engineering to warrant respect when he spoke of political and economic aspects of cybernetics.

He glanced at the time as he walked towards the conference room at the end of the hall from where the elevator had deposited him.

His neatly-planned arguments were tumbled in disarray in his mind by the fact that Ross had uncovered. What could the cancellation of all Board contracts mean—what, except they knew the truth about the brains? In that case he must be dealing with monsters.

AND, if it were so, why had they hidden it from him and him alone? He was one of them. As Engineering Advisor he was a full-fledged member of the Board.

Yet he seldom approached the conference chamber without a fleeting sense of discomfort. He was an engineer—he did not belong in the same arena with

politicians and economists and policy makers.

Today he felt no guilt. But he felt fear.

They were seating themselves about the massive conference table as he entered. The cool green walls of the chamber seemed chill. The long yellow table about which they would sit loomed like a dread gladiatorial pit.

Some of the cyberneticists were waiting and talking near the door until he came. He shook hands with the half dozen nearest.

"I hear you have something of importance." Dr. Ryberg, a neuron synthesis specialist took Al's arm and walked towards the table with him. "Senator Humphries seems to be in a foul humor this morning—as usual. Some of his bills are having a bad time in the Congress. He's not liable to be agreeable to anything you say, so I hope that you can trim it down to his brain's size."

"I'll keep him here all day and pound it in with Jurgen's gavel if I have to," Al grinned. "He's one that's *got* to understand what I have to say."

"Well, take pity on the rest of us and include us out if you have to lock horns with him," grunted Ryberg.

Dr. Seymour Jurgens, white-haired and lean with age, had been a renowned cyberneticist in his youth. Now Chairman of the Board of the Cybernetics Institute, he rose, tapping gently for attention.

"This special meeting of the Board of Directors of the Institute of Cybernetics has been called at the request of our Engineering Advisor, Dr. Albert Demming. There is no other business. We will therefore give Dr. Demming the floor at once."

Al rose from his chair and surveyed the group of men. Twenty-six of them. As a group, they formed the most powerful policy-making body outside of the Congress.

Individually they weren't impressive, Al thought. In any other circumstances they would have been poor adversaries. But here they wielded power delegated by the Welfare State—power he questioned their wisdom to use.

Drs. Jurgens, Ryberg, Benson—he had counted on their understanding, their backing. Had each of them, in secrecy and fear, nullified his own contract that allowed use of his brain for cybernetic purposes after death? He wondered how these great men had looked and felt as they wrote out their cancellations.

"In something over five hundred years of time," said Al slowly, "the science of cybernetics has been born out of the rebellion against one extremity of thought. It has plunged through a long swing of development and technology and now, at last, has arrived at the end of the first half cycle of its history—at the opposite pole of thought from that in which it originated.

"When the stirrings of cybernetics first appeared, the dominant thought in biology was that of the vitalists, who considered biological principles completely beyond the research attack of the physical sciences. The principles of

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biology were axioms, not requiring explanation in terms of physics or chemistry and wholly beyond analytical study.

"Today, at the other end of the pendulum's swing, there are no biological axioms. In cybernetics we have reached the last outpost in our knowledge of the human brain. We have mapped it down to the last neuron. We can literally tap any of its billions of cells and discover the forces at work."

His fellow cyberneticists listened with attention, following his buildup that they might evaluate the points to follow.

ence of 'live' cells for long periods afterwards. We know that in cybernetic engineering it is of utmost importance to feed and renew the neurons of the brain before gross disintegration sets in. We say that the cells remain 'alive' but that the organism itself is 'dead.' And we prove our thesis by the many attempts to revive the entire organism.

"In all this, however, we have failed utterly to define life or underline its requirements.

"One of the phenomena of cybernetic engineering presents a challenge we can

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But the governmental representatives stirred uneasily.

Senator Humphries, the Congressional Section Chairman, said brusquely, "We are well aware of these things. Is it not possible to come more directly to the issue if you have anything new to present?"

"At once, Senator," said Al evenly. "I present for your consideration that we have adopted many unwarranted assumptions in our haste to reach the end of the pendulum's swing.

"We have, for example, failed utterly to pursue the question of what organic factors constitute the phenomenon of life. We can map and duplicate the physical and chemical phenomena involved in the many neurons of the human brain. But we can in no way distinguish the presence or absence of life in the human organism except by gross manifestations of activity or of disintegration on the part of the organs themselves.

"We can declare an organism 'dead' but we can easily demonstrate the presignore no longer. I refer to the adjustment collapse, so called. In at least ninety-five per cent of our installations there is a period of total collapse of function following the initial visual stimulus. I have collected over fifteen hundred electroencephalographs of brains during this collapse period. Their study permits only one conclusion.

"The collapse is not a phenomenon of brain cells that are being manipulated by electric impulses like dead muscle tissue. It is a phenomenon that could take place only in a living organism!"

HE watched their faces and there was—nothing. They registered no shock from his statement. They knew, he thought, and they did not comprehend.

Words were not enough. He should have found some way to show them the pain, the agony of abandonment and desolation of the cybernetic victims.

Senator Humphries and his colleagues appeared mildly insulted. Dr. Jurgens seemed disturbed in a way that Al could

not understand. The scientist was looking from side to side, eyeing his companions, never once looking directly at Al.

All around the table there was perplexity, uneasy concern, but nowhere the shock of horror that he had hoped his pronouncement would bring. No recognition of the immensity of the thing that he had uttered.

He slapped the table harshly. "Gentlemen, do you understand what that means? Two million men and women—living, thinking, tortured by despair, sentenced to an eternal slavery in the hearts of our machines!

"These cybernetic brains are not mere pieces of discarded flesh. They remain human beings."

He might have spoken to wooden images. Their silence frightened him. No one spoke. He tried to catch Ryberg's eye, challenging him to comment, but his fellow scientist only looked down at the bare yellow table. There was only a faint shifting of feet, the shuffling of paper, the uneasy glances at each other.

"Gentlemen, in the name of humanity we must abandon this practise of cybernetic brain control. Beginning now we must renounce all contracts that the Institute holds and begin a program of electronic controls to replace our present ones. We must take steps to establish communication with all those we have imprisoned and give them death, if they wish it, or life under the best circumstances we can provide."

There was movement now. It was as if they had been waiting for the solution he had to offer.

Dr. Jurgens spoke first. "You would utterly abandon cybernetic brain control and research in the face of this evidence you have uncovered?"

"They are useless as controls if they are actually 'dead.' And we have no right to continue imposing such slavery—even upon those who would have been irretrievably dead except for our work."

"Has it occurred to you that this unasked extension of life might not be unwelcome? Are you so sure they are not grateful for it?"

Al nodded slowly. "I'm very sure. Is there a single one of you who would welcome extension of life under such conditions? Is there one of you who would welcome the knowledge that he was blind, deaf, mute, utterly removed from human companionship for an uncertain eternity?"

He glanced about the circle of tight faces. "I see no response of great joy. You can all share such eternal bliss, you know. You have only to make a contract with the Institute of Cybernetics and make sure of near-eternity—in hell! How many have taken advantage of this wonderful opportunity? You, Senator? Doctor Jurgens?

"I still see no response. Perhaps you don't believe what I have said. Perhaps you don't believe these people still live. But, if so, I wonder how many of your contracts the Institute holds. At one time all but five of you had made contracts. I find now that every one has been cancelled. Why?"

Suddenly, he knew he was right. He understood the side glances, the uneasy countenances.

"You have known the truth of this for a long time! Your own researches suggested it long before my confirmation. Is that not true, Dr. Jurgens?"

The Chairman nodded slowly. "You probably observed the date of cancellation on our contracts. That was when we became convinced of it."

Al looked from one to the other. "I can't understand," he said, "why you have done nothing about this. Are you such monsters that you would willingly condemn endless thousands to cybernetic imprisonment while assuring your own escape from it?"

"Perhaps we *are* monsters," said Dr. Jurgens slowly. "We have wrestled long with our own souls—those of us who still have souls," he added with a wry glance in the direction of Senator Humphries. "We have come to a studied conclusion, however, that cybernetic brain control must go on. There are arguments for and against our decision—"

"What possible arguments are there *for* such a decision?" Al demanded in

fury. "My sister is one of those you have entombed! Give me one argument!"

"We have a world to consider," said Jurgens slowly. "I'll let Dr. Armish show you what would happen to that world if we used your solution."

AL turned his head sharply. The economist was a man whose insides he could hate with pleasure.

The bland goateed face of Dr. Armish seemed unperturbed. "A major collapse of our economy would be the immediate result of the rash proposal. It would risk the entire concept of the Welfare State. Civilization as we know it could never survive a return to the concept of physical earnings based upon direct human performance. That is what your proposal would mean.

"You are certainly not unaware of how close to breakdown the Welfare State approached just before the inauguration of cybernetic brain control. It cannot be adequately replaced by electronic control. As an engineer you are more aware of that than I. And we can compromise with nothing that threatens the Welfare State. It is the most sublime political and economic structure ever devised by the mind of man.

"The subsidy as an inalienable right is deeply ingrained in the philosophy of man. To compromise it would be a return to the jungle, a return to the brutal competitive warfare of ancient economics. The insurance against such a return is well worth the sacrifice of the two million about whom you are so concerned.

"And may I add that you have offered nothing but supposition? You have not established communication with any of these control brains. You have only guessed at feelings they might or might not have. You do not know."

"They *are* human beings," said Al. "Is it difficult to extrapolate their reactions in such circumstances?"

"You have offered only surmises," Armish repeated smugly.

Senator Humphries spoke. "We in government," he said ponderously, "have always marveled at the naiveté of you engineers and scientists upon whom we have so long been dependent. You pride yourselves upon your reasoning abilities, your great competence in reaching the abstract from a consideration of a few concrete realities.

"I have consistently failed to detect such powers. Here we have your proposal that we abandon cybernetic brain control in favor of a proven archaic system, and you give no further thought as to the political impact upon the world.

"Cybernetics is the life blood of the world. Without it, the flow of goods and foodstuffs would cease instantly. The masses would rise against all organized government in a wave that could not be controlled. No, my simple friend, your solution is so utterly fantastic in the light of realities. What would become of civilization and man if we were suddenly without the blessings of cybernetics?"

"Man might be forced off his lazy fat end and put to work," said Al.

Dr. Jurgens drew his attention. His voice spoke with finality as if the conference were nearing its close. "This information, which we have discussed, can never be permitted to leave this room, Dr. Demming. Our decision has been reached after mature consideration of the factors on both sides. Cybernetic brain control must go on.

"Though we suspected these facts as long as three years ago we did not take you into our confidence because we felt your reaction would be as it has been and we needed and still need your services. Therefore it is imperative that you join us in our determination, that you give us your word of secrecy and submit to such procedures as will insure it will not be broken."

"I'll shout what I know on every street corner in the world," said Al. "We'll see what will happen when men find out what is happening to their loved ones. We'll test the political sophistication of the relatives of those already entombed. Perhaps I will find myself in very numerous company, Senator!"

"I believe you would do it," said Dr. Jurgens sadly. "I'm sure you would, Al."

Then he nodded suddenly as if to

someone behind and beyond Al. The engineer hesitated a moment in puzzlement. Then he whirled—too slowly.

There were three sharp reports, very faint and so close together as to be almost one. The slugs ripped into his back and tore his heart to pieces. The force of them slammed him forward onto the table where the widening red pool of his blood spread out against the yellow surface.

In the fraction of an instant before he died he raised himself jerkily, his eyes locked with Dr. Jurgen's. He couldn't be sure, but he thought the scientist murmured, "I'm sorry, Al—sorry it had to be this way."

CHAPTER V

Creation

ESCAPE. The word and the hope tormented through sleepless, endless days and nights.

Escape. A mocking fantasy in that silent world where the only vision was the maddening sight of the indicators.

For two days John had been a part of the machine. The impressed directions were terrifying at first. They poured like an invading swarm from the tape readers to his brain. But there had been no pain. After the first fear it seemed more like some tantalizing melody that cannot be forgotten. Neuron chains within his brain passed those instructions on to the thousands of control points in the great plant.

It brought a new and greater dread. He sensed the time could come when every neuron chain would be commandeered by these unbidden pulses. His own area of thought would be driven into ever narrowing areas until only a tiny swarm of cells would remain in which he could carry the memory of his name, the agony of his entombment—and the image of Martha.

He feared the nightmare invasion would wholly suffocate and jam his own initiative. At the same time it fascinated him to examine those pulses that went to all the vast machinery of the plant, controlling flow of chemicals in a thousand channels, regulating temperatures, and rectifying error through the complex feedback circuits formed from his own neuron chains.

And Al had not come back.

There had been no word from Martha's brother since that first hurried message ten days before. Since then John had glimpsed other engineers in his field of vision. Some of them he recognized from brief introduction through Al.

Their presence meant Al had been replaced, he thought. Or it could mean that they had been brought in for assistance in some unusual difficulties on this massive installation. But Al would have come back if he were still on the job.

The sense of increased power and well-being continued in John's mind, but the loneliness stayed. With Al's continuing absence it grew and made him sick with dread abandonment. He longed to know the fate of Martha. He could only believe that harm had befallen Al.

He forced himself to abandon the hope that Al might find a way to freedom for him. He faced the loneliness again and thought of long years to come.

And always the stream of control impulses throbbed in his brain, a ceaseless melody to which he could not close his senses.

As he listened to it a new and frightening thought came into his mind. He need not be a slave to this thing, he thought. He was still in command of his brain and its facilities. He could even block those pulses passing through his cells. He *knew* he could.

He could twist and distort those instructions until the plant became one huge and chaotic mass, a volcanic inferno of boiling, consuming chemical terror. By careful synthesis he could make a vast horror that would wipe out the countryside for miles around. That at least could be his vengeance.

But it could not give him escape—as

if the word had meaning for such as he.

Why it was possible for him and had never been done by others he did not know. He only knew that power to control the things in his command was within his volition. He pondered—and left the flow of intelligence untouched.

Synthesis? If he exerted control what complex creations could be produced? No single chemist had ever had such a colossal laboratory under his lone command.

What could he make? What did he need? Eyes and ears for himself? A mouth with which to speak and hands to fight and build?

It was no use, he thought with resignation. Even absolute control of this vast plant would give him nothing. There was no way to gain a voice, to hear Martha speak his name, to look upon her tender image once again.

He cut off the thought abruptly. He held it tight lest something vital escape and never be found again. What was it he had considered? The things he could make—eyes and ears—a mouth and hands?

A sense of chill swept through his brain. Was it within the bounds of possibility? Could he somehow mould a thing by which he could see, by which he might hear and be heard—by which he might leave this inhuman bondage?

It was possible.

He allowed that whisper of thought to enter his consciousness. He held it there like some strange and precious jewel, turning it slowly, examining each facet with all the knowledge at his command.

PROTEIN synthesis was the mainstay of General Biotics. With it he could build cells—cells that could be kept in a semblance of life for days by irradiation. He knew that technique. It was common.

But it was not enough. To build those cells into organs, to multiply them, join them, give them function—he despaired before the titanic enterprise his brain had conceived.

And for all its hopelessness there was nothing to lose. He had endless days and he had nights when other men slept. There was no barrier but the difficulty of the task itself.

He turned to the flow of signals that was like unbidden melody in the background of his mind. With a mighty surge of consciousness he seized upon that flow, twisted an impulse with experimental fury—and waited for the feedback alarm to challenge his intervention.

He lost all track of time. He abandoned the useless mental scale he had devised. He simply worked at a ceaseless maddening pace that he sensed was more than human but he dared not question the miracle by which it was possible.

There were long hours of careful experimentation by which he learned to control and divert the flow of the giant chemical works. He had to maintain the production and quality intended by the tape instructions.

His own goal was to divert from that flow such materials as he needed, assemble them in vats and tubes that were temporarily unused and guide their flow where none of the rare human inspectors might question.

After four days of this he had made a thing.

His first product was a white grub the size of a man's fist. It was shapeless and immobile and somehow terrible in its twitching semblance of half life but at its core was a cluster of synthetic neurons. And on one side of it was a fantastic Cyclopean eye.

It was a crude thing—like some mistake that Nature had produced and buried at the bottom of the sea. The blank lidless eye was perpetually open, its only expression one of idiocy.

Actually John did not know how it looked nor would he have cared. He had nourished that small colony of specialized cells carefully for a single purpose.

And it was done. He hesitated, considering the feeble grotesque thing he had made—and sent out a call.

He could close the vision channels connected to the orthocon cells. He closed them now and turned his visual percep-

tion in another direction—through the darkness beyond the glass walls and the brick and steel ones, through a thousand feet of space—

Into that effort he threw all the vast forces his mind could command. He delved deep into his brain with powers he had never before possessed and activated neurons that had lain half dormant, only partially completed by the forces of biology that had formed him. He thrust the energy at his command into those cells, activated them, burned them with the flaming energy of birth. And then he saw—

Light! A hazy image of almost no definition but it brought a surge of hope that far surpassed that first glimpse when the orthocon cells had been turned on.

Crude and imperfect as his creation was he had reached out and brought in the telephathic impulses generated by those unique specialized cells he had built. Across the barrier of distance and impeding walls they sent a message of light and image.

He barely recognized the outlines of laboratory apparatus upon which the gaze of that idiotic Cyclopean eye rested. But it was enough. He knew he could do better. He could build a better eye and he could multiply those telepathic cells.

The incessant labor of his mind brought him no fatigue. With the facilities of the plant at hand he could carry on a thousand experiments at once in separate laboratories and shops. He sent out commands and caused to be built a score of experimental sites that had not existed.

And through it all he kept the mountainous flow of chemical products turning out at a steady pace in strict accordance with the instructions set up. He had found it wholly possible to relegate those to the subconscious levels of his mind, leaving his consciousness free for his own work.

Never before had a cybernetic brain or any other brain operated as his was now doing. He knew it but he gave it little concern. If the miraculous were in operation he was willing to accept it.

As for the few human inspectors who patrolled the plant occasionally, they knew so little of the giant workings that an extra shop here, an unfamiliar laboratory there passed wholly unnoticed by their eyes. Production was what counted. Only when production failed did they investigate the mechanisms or call in the cybernetic engineers. Only once in a decade did this occur at most plants.

His second creation was as unbeautiful as the first.

It gave him clear sight. Its telepathic powers brought to him an accurate vision of the laboratory in which it was created. He comprehended, as he saw it for the first time, the beauty of sheer sensation. He asborbed every detail of that room over a thousand feet away from him. Its gray metal walls were the most beautiful things he had ever seen.

More than this he had built into his creation. There was a tiny auditory diaphragm. He sought for neuron chains that would respond to telepathed sounds.

And he heard it. A faint hiss, the rush of flowing air from an escape valve, the intermittent click of guiding relays, the slow thunder of tumultuous chemical whirlpools in nearby vats.

He heard them all—the faint whispers of sound, the roaring, deafening cadences of the mighty plant. He saw and he heard.

He had no eyes and he had no tear ducts but he cried at the miracle. He cried solemnly and thankfully for the blessings of sight and of sound that he had once abandoned without hope.

BUT there was more yet to come. Had the final synthesis of cells been successful?

He sent out an impulse. The vision in his mind leaped crazily, twisting and turning, then jerked still, revealing a glimpse of the floor of the distant laboratory.

The thing was on its "face."

Into the base of it he had built two simple bands of muscle tissue. Their contraction would produce a sudden projection in the base of the thing—causing it to leap into the air.

It worked. But he had not looked for this eventuality. It lay helpless now and immobile. It would be as useless as a rock if he could not right it.

He jerked the muscles at random. The thing pulsed and quivered, transmitting an image that jerked and hopped —and abruptly stood upright.

He experimented again—just a faint pulse this time to both muscles. A slightly stronger one in the rear. It gave a hop forward and landed upright.

Frog, he thought.

It jumped again and again. And once more it landed helpless and jerking. He righted it and practised ceaselessly. Slowly his control improved. He gained facility enough to be able to make the frog turn over in mid-air and land upright. He could make it turn quickly to shift his point of view as if it had a neck and a head.

He sent it through the doorway and out of the building in which it had been created.

For the first time in many days he felt a trace of actual fatigue. The energy required to control the frog was not great but the process of learning how to manipulate it tested the capacity of the nutrient fluids to replace his powers.

He rested while the frog surveyed the surroundings outside. John had toured the plant of General Biotics during his development of processes they were now using. He remembered vaguely the general layout of the multiple buildings and forests of vats, chambers, retorts, and furnaces. But he could not identify the location of the frog.

He moved it at random, exploring, surveying his surroundings. But dusk had fallen and it was almost too dark to see. The frog eye was as sensitive as a human eye but no more. The next one he would make responsive to infra-red, he thought. He turned it around and led it back in the direction from which it had come.

After minutes, he knew he was still on unfamiliar ground and that he had taken the wrong turn somewhere. He had lost the laboratory. The best thing he could do was to back the frog into some corner for the night. No use risking it in the dark and getting it damaged. He would be able to use it in the making of others. It would provide sight he had badly needed in the production of this one.

He sent it into a corner against a building and left it there.

The presence of night outside and his awareness of it through the frog sent a longing for sleep through him again. He felt tired—tired of the intense mental effort that he had performed the past days, tired of the existence that was forced upon him.

His thoughts went wearily back to the day of the accident as if it were some magnet that drew them when he was in despair. Sometimes he still thought it would have been best if he had died.

He had tried a thousand times to understand how that accident had happened. Memory had gradually grown clearer. He remembered that another car had met them on the curve, forced them to the soft shoulder of the road—through the guard rail. It was the stupid purposeless kind of accident that was so bitter because of its utter stupidity. He supposed the occupants of the other car had been wholly unhurt.

But that memory had lost some of its terror and bitterness in the days that had passed, he thought. He had even managed a degree of resignation toward his present situation—but that was perhaps wholly due to his success with the frog.

Yet always would bitterness shroud the memory of Martha. He had abandoned all hope of learning her fate, but now it seemed within the bounds of possibility. He could send the frogs out as messengers. With them he could read news and listen to conversations.

With the frogs he might even find a way of contentment and reconciliation with his fate, if he could but learn that Martha was well and happy.

But he couldn't believe she was. He remembered her scream and her white deathlike face as she was thrown from the car. If she lived he felt that she couldn't be happy. Somehow she would

have found him and come to him. He sensed that somehow he could feel the sorrow that was within her. He could almost hear her crying, he thought.

He could almost hear her crying!

It was no dream! Her voice was in his brain. He would know it among ten thousand others. She *was* sobbing, slowly and in fear, as if she had been crying for a long time.

Involuntarily, he cried out in his own imprisoned brain, "Martha! Martha, darling—where are you? Martha, tell me it *is* you!"

And, before his newly conditioned reflexes could conceal the impulsive cry, there came an answering call, "I'm here, John! Let me touch you. Oh, John, darling—where have you been so long?"

CHAPTER VI

The Frogs

THE frog lay dormant in the darkness, its gray-white blot scarcely visible against the concrete yard and the walls of the building by which it huddled. But through the telepathic cells that formed its major organ pulsed the cries that burst from the lost and abandoned souls of John and Martha Wilkins.

John held his silence, not daring to speak for the emotion that was in him. For a brief moment there had been an utter blankness of disbelief, then the swarming flood of realization. He *had* heard Martha's voice—and it meant only one thing.

She was somewhere on these grounds, imprisoned as he was. He had left his mind in contact with the frog and it had picked up the impulses of her mind, transmitting them as vocal cries.

All the devastating fears that he had tried to reason away crashed down upon him. He had hoped and prayed that somehow Martha could be spared this fate of his.

He thought of her words. She sounded as if she did not yet know where she was or what had happened. Could they have delayed this long in using her for control?

"John! Why won't you answer me? Did I just dream that I heard you speak or was it real?"

"It's real, darling," he answered softly. "Wait just a moment and I'll come closer."

He moved the frog clumsily in the darkness but he could guide it in the direction from which her thoughts originated. It was in the very building against which he had hidden the frog.

He followed cautiously around the wall. On the far side he finally found an open doorway. In the control room it was dark, but he knew what it was by the flash of panel lights that activated relay cells. As nearly as he could see it was in a turmoil of half finished construction. That was why Martha had not yet found out where she was, but it was a typical cybernetic control room like his own.

He had seen such setups hundreds of times. But never one that formed his own wife's living tomb.

"Martha—can you hear me?"

"Oh, yes, John. But I can't see you or touch you. I'm blind—and I thought I was deaf. Yours is the first voice that I've heard. Take my hand. Let me touch you again. It's been so long. I thought you must be dead. Are you hurt? Come closer to me. I've been so alone and so afraid!"

"I'm right here, Martha," he said tenderly, "and I'll never be away from you

again. We'll never be apart again."

"Where am I? What has happened to me? I know I must be terribly hurt, but I want to know the truth."

He remained silent. How could he tell her? What words could he use that would not destroy the last remnant of sanity.

"John—please!"

"Our bodies were destroyed in the accident," he said slowly. "They removed our brains and put them to cybernetic use. That's where we are now. In General Biotics. I'm in control of part of the plant production. You have not yet been given control."

"John! You're insane! We're alive, breathing, talking—cybernetic brains are dead!"

"That is what has been supposed. It isn't true. Every one of the millions imprisoned like us is a living human being. I learned how to make a device from the chemicals I control. I am talking to you through it but it is not speech. It is telepathy."

Her voice in his brain sounded hysterical now. "It isn't like you, John. You're playing some kind of crazy joke on me. How can you at a time like this? Give me your hand. Let me know you are here beside me, darling."

"I have no hands," he said simply. "I have no voice. Listen a moment. What is it you hear? Are there words from my my lips?"

She was silent, as if listening. And then he heard the sound of terror. It was not a thing that voice could utter but the raw chaotic clash of neurons. He heard it begin as a low wild sob that mounted as she tested his statement. She searched through the vaults of memory for recognition of the thing that she heard in her brain—and found no familiar echo.

Her scream of terror then, shrieked again and again in repeating waves until he had to close his mind against it to keep that wild neural energy from crashing through the control chains that governed the plant.

He was sick with the thing that he had done. Was there not some way that he could have been less crude, some gentler way of revealing their state? There should have been, but he was not aware of it. He remembered his own collapse and pitied her.

Cautiously he opened his mind to her again. She had not gone into coma but her mind was in utter chaos that transmitted only a low sobbing sound of ultimate loneliness and agony to him.

"Martha—Martha! Can you hear me?"

He sensed the slowly gathering forces of her mind, reorganizing themselves after that scattering blast. There was power and strength in her, he thought with silent admiration. He could feel it as order grew out of the ruinous dispersion of her forces.

"Martha!"

"I'm sorry, John—I couldn't help it. You made me believe but I can't comprehend it. I know what a cybernetic control room looks like but I—I can't be in that platinum box in the center. This is all a very bad dream I'm having. When I wake up—"

He could show her when there was light, he thought. He could transmit the image of her own control center as seen by the frog. But he decided against it. That shock could wait. It didn't have to be piled on top of the one he'd already delivered.

"How long have we been here? Tell me what you know of the events that have happened."

She was speaking with forced calmness now and that was good, he thought.

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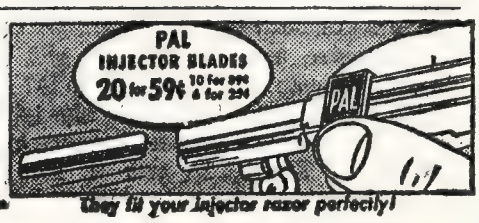

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She needed to take stock of the situation. Briefly he told her of his own painful awakening, the days of darkness and silence, then the message from Al and the synthesizing of the frog.

SHE listened without comment until he was through, then she said, "Why do you think Al never came back? I'm worried, John. He would have come unless something happened to him."

"I don't know, darling. He's our only link with the outside and it's possible his revelation of our state caused trouble in his relations with the Institute."

"Al can speak for us!" she said almost fervently. "We've got to reach him again!"

It was not mere hope for a link with the outside, he knew. It was Martha's little-girl faith in her brother. The big Swede, she called him to his face. It was the kind of thing he could never inspire in her, he had thought in many rueful moments. But it didn't matter.

"We'll find out how," he said. "It's a sorry substitute for legs but the frog can make pretty good time and he's due for brothers and sisters. When you get the means you can make some with me. Until then you can take control of some of mine."

"But how do you do it? While you've been talking I've been trying to reach out from—from this blackness but there's only void. It's so dark and so empty. I have to keep talking and thinking to keep from screaming."

"I'll release it completely. See if you can grasp control."

She was silent a moment. He could sense faintly her struggling and groping. Then, "There's nothing there," she said. "Nothing at all that I can get hold of."

It had seemed so easy for him. He had instinctively sensed the telepathic powers dormant in him. It had been simple to seize upon them and put them to use. Why couldn't Martha do it?

He tried to explain it and she tried to find such powers within herself but in vain. Her ability to talk to him was more dependent upon his power to seize the content of her mind than upon her ability to project it.

"We'll try again later," he said. "You're exhausted by what I've told you. Try to rest and compose yourself for now."

She was silent for a time, then she spoke with a swift change of subject. "I don't want to die, John."

"Die! What in the world are you talking about?"

"Shouldn't we be wanting and praying for death? Is it sane for people to want to go on living under circumstances like these?"

"I don't think we'll want to go on living for very long—under circumstances like these," he said slowly. "It's hope of change—escape, a purpose in existence—that makes us want to keep on living for the moment. But I imagine most of the brains are yearning for death."

"But it's still crazy, isn't it—wanting to live? No matter what happens we'll never have release from these platinum boxes. We'll never have the senses of our bodies again as long as we live."

"We'll have the frogs," he said. "They can give us sight and sound and companionship. We have each other."

"Each other," she murmured. "You're my husband and I can never know even the touch of your hand for the rest of our lives. I can never know what it's like to see you coming home and feel your arms about me and your kisses on my lips."

"Martha!"

"I'll never be able to watch you grow old with me, and you can never tease me about that first gray hair. And those children we would have had—who will bear them now that I am a barren thing—a scrap of tissue in which I cower?"

"Stop it!" he commanded harshly.

"We've lost all those things," he went on more gently. "But men have always believed there was a spirit within them that transcended all else. If it is ever to be proved we have a chance to do it. Perhaps we can reach that communion of which men have only dreamed.

"As to purpose in our existence—it's greater than ever before. You and I—and Al if he has not come to harm—are the only ones who understand the state of the cybernetic brains and have some power to make that knowledge public.

"We've got to let the public know so that they can bring an end to cybernetic brain control at once before many more are imprisoned like us. Surely that is purpose great enough to fill our existence with meaning?"

"Yes, it is, darling. I'll do all I can to help. But don't be impatient with me—if those other hungers sometimes become more than I can bear."

"Remember that I have them, too," he said quietly. "Don't you think I've seen the face of Donny while I've been here? He would have been the first one, remember? The one who would have had the cowlick and the freckled nose?"

CHAPTER VII

Contact Outside

THE noon sun burned down upon the white frog. He had come thirty miles since dawn. Part of the time had been spent in hitching rides on cars that stopped for service or shopping along the bright highway. Other long minutes had been wasted in devious corners, hiding when someone approached too closely.

John was satisfied with the progress, however, and he had gained experience in controlling the frog with minimum effort. He felt that he would almost proceed with the production of others while guiding this one but he didn't want to risk its loss by not giving it full attention.

He wished that he might have gone ahead and used it in making others but he wanted to know about Al. Martha was worried because of her brother's absence. The quickest way to find out would be to send the frog to his house.

By midafternoon the frog was less than a mile from the house where Kit and Al lived. The frog was progressing under its own power. It was here that John first noticed trouble. The sight of the frog was less clear. Frequently it was falling down, tumbling over on its side and on its eye.

John grew irritable with himself. He cursed his own inaccuracy of control. Perhaps it was the effect of distance. The telepathic powers might be incapable of operating at such a distance but he didn't believe that explanation. It must be some fatigue effect. He waited a moment to let his powers and those of the frog rest.

While he rested the image in his mind grew dimmer. With a sudden thought he sent the frog clumsily toward the sunlit window of a nearby house. It leaped up and faced the glass.

In the faint reflection there John caught a glimpse of his creation. The white skin of the thing was burned and parched. The hot rays of the sun were destroying it. Quickly he dropped it to the ground amidst some shrubs. It lay there a moment and the vision slowly faded to darkness.

He felt fatigue then—such fatigue as he had not known since that first agony had begun to recede. He had to start all over again, blindly, without the help of that frog to make others. It was doubly hard and the risk of failure a hundred times as great as if he had the sight of one frog to guide the making of others.

And Martha—he was cut off from her again. He felt sick with pity for her. She would be in blind and silent abandonment again, wondering why he had left her.

He returned to the task of producing another frog, one that could withstand the rays of the sun, one whose eye could respond to infra-red light, that he might use it at night.

He set into play the hundreds of experimental forms that he had used before. The growth of the synthetic protein structure was a slow and cautious process. A moment's haste would throw them into monstrous forms of uncon-

trolled growth that could perform none of the functions required of them.

Whether because of his anxiety regarding Martha or because of the new functions he was trying to incorporate there seemed to be a dozen times the failures he had experienced before. He started over the long weary process again and again—and produced only useless blobs of cells.

And then, in the midst of the recurrent failures, he was startled by a gentle sound.

"John—John, can you hear me?"

He didn't believe he had heard it. He waited for its incredible repetition. "*Martha!* How did you—?"

"I've been watching you, darling. It reminded me of the time when Father asked you to build a shelf in his lab. Remember how you cut three of them before you got one halfway square and of the right length? But even then it was so bad he took it down after you left. I never did tell you."

"I noticed later. I guess I'm not much better as a chemist than a carpenter. But what did you do? How are we talking?"

"I don't know. The cybernetic controls were put into operation. I felt the information—you know what it's like, of course. And then, all of a sudden, I seemed to be watching you at work, understanding your thoughts. And I knew if I spoke you would hear me."

"The dual control system! I remember now. Al told me about it and that it was being planned for General Biotics. This is it. The combination of two brains in simultaneous control to overcome the problems that have baffled cyberneticists so long.

"It means such close neural connections that our brains can operate as a single control. It also means we can talk without the use of telepathy or anything else. It also means—"

"*John!*"

"Well, all right. You can block off a few million cells and put up a *Keep Out* sign in front of them."

The laughter died away and he could feel her changing mood like a dark tide rising. "We must be drunk or crazy," she said. "How else could we be laughing?"

"Come and help me, Martha. I need your help with these frogs."

He led her on, trying to teach her to forget. He showed her the laboratories he had taken over, taught her the synthesis that he had devised. "Now give me a hand with this batch. I haven't been able to control and stop the growth at the right level."

Some of the loneliness was gone, he thought. It was almost as it had once been. The two of them leaning over a laboratory bench, intent upon some biochemical process of fantastic complexity.

FOR an instant it was as if he could feel the brush of her hair against his cheek as she bent near.

The frogs were successful. They gave them eyes and now Martha was able to control and use them as well as he, though neither could explain her earlier failure.

"I never knew it was quite so wonderful just to see," she murmured. The first frog in her control hopped deftly to the top of a shining brass cylinder. From there its gaze encompassed most of the laboratory in which it had been created.

It was not the cluttered maze of the manual laboratories she had known. There were order and beauty. Glass and silver tubes in multiple bands cast reflected ribbons of light against the ceiling.

John felt the sensory ecstasy within her. "It was laid out by a cybernetic design machine," he said. "You can be sure that everything is exactly where it ought to be from a performance standpoint."

The frog hopped to the floor and went out. Between the distant towers of a building the sun was lowering between bands of clouds that colored the sky.

"We've got this," murmured Martha. "And it's glorious and wonderful. Am I greedy in wondering if we can ever have more?"

"I don't know. After we see the end of the cybernetic brain program there will

be time enough to find out."

At Martha's suggestion they improved the frogs still further before sending them out. The diminutive storage of energy made them short lived. They devised an elementary digestive system for a grass-eating form. It was a nightmare in appearance but it worked.

The skin was dark gray for better hiding and protection from ultraviolet rays. The single eye remained in the center of what might be called a face. There were no nostrils but a simple skin-absorption system provided oxygen.

The mouth was the esthetic failure of the whole creature. It was a vicious opening surrounded by small, rusty looking chisels of teeth—they were constructed with an iron base instead of calcium. It was, on the whole, as unlovely a creature as any surrealist had ever drawn upon canvas.

The most important improvement, however, was a cluster of memory cells. It was little more than a neuronic switch and timer but John believed it would relieve them of considerable burden in guiding the frogs.

He led five of them out of the laboratory and away from the plant. Then he set them on the highway. He gave them detailed instructions to proceed by any possible means and to reach a central meeting point without detection.

Like preset automatons they bounced off through the brush, ever careful to keep out of sight. It was a relief not to have to follow all the way. The bouncing vision made him dizzy.

During the afternoon he made occasional contact. They had successfully hitched rides on vehicles, though one had gone the wrong way for a time. With recognition of the error, preset synapses merely directed it to get off.

It did—with the car traveling a hundred and twenty miles an hour. It was nearly destroyed by the fall but it was serviceable and immediately hitched another ride in the right direction.

But something happened to one of them. When they were nearly there he checked them and could make contact with only four. The fifth had vanished. He was concerned about it because he didn't want them lost over the countryside.

It was dark when the frogs reached the house. There was no light. Neither were there locked doors. The need for theft had long since vanished and psychopaths were destroyed at birth.

Al and Kit had only an air block against undesirable outside temperatures on their main entrance. He left three of the frogs outside and led one into the house. He found his way about easily with the infrared vision of the frog. He went into the bedroom wing.

Al was not there. Kit was alone in the big double bed. But she wasn't sleeping. He could see her eyes were open as she lay there, staring in the darkness.

"Kit." He made the telepathic call as gently as possible. She didn't seem to have heard.

"Kit."

"Be careful, don't frighten her," said Martha.

KIT'S eyes moved toward the doorway and she raised her head in a small start of fear. But she didn't believe she had actually heard anything.

"Kit. This is John."

She sat up with a stifled cry. "Who is it? I can't see. John who—?"

"Listen to me, Kit," he said swiftly to get his message out before fear seized her. "You can't see me but this is John Wilkins. I want to see Al. No, I'm not dead. I'm very much alive. Don't be afraid. Listen to what I have to say."

Her fear was not allayed. He could see the tension in her face reflected at near the bursting point. "You can't be John Wilkins. He was killed. His brain is a cybernetic control. Who are you? What do you want of me?"

"Listen! Didn't Al ever tell you he believed the brains were alive?"

"Yes—yes!"

"He was right. I *am* a cybernetic brain but I'm alive too. I've found a way to freedom that none of them has ever found before. Martha is here with me."

"Yes, I'm here," said Martha. "Be-

lieve us, Kit. Where is Al?"

She ignored their question. She seemed almost in a stupor of shock. "I don't understand—I don't see how—"

He told her of the frog and how they had made it.

"Let me see the frog," she said abruptly. "Show me something that I can see with my eyes, so that I will know I'm not in a nightmare."

"You wouldn't want to, Kit," said Martha quickly. "It's a nightmare in itself. We didn't make it very pretty."

"I want to see."

"On the night table, then," said John.

The frog leaped to the table top as Kit brushed the light cord. It sat there, its green, Cyclopean eye reflecting the light of the lamp. Its open mouth showed the ring of murderous teeth.

Kit gave a single shrill scream as she saw it there almost on a level with her eyes.

"Please!" begged John.

She clung to the filmy cover that lay over her. Forcing her hand in the face of unabated terror she reached out and touched the frog. Somehow it seemed a reassuringly dead and artificial thing to her.

"It's the only way we could make contact," said John. "We want Al to see it. Will you tell us where he is?"

"I'm sorry I screamed," Kit apologized. Then her voice broke in a repressed sob. She put her face in her hands and sat up in bed. "I'm worn out with worry and sickness over the loss of Al. I have no presence of mind left."

John felt the sudden chill of fear that swept through Martha. "Loss of Al! Kit —what do you mean? What's happened to Al?"

Kit looked up into the unblinking eye of the frog. "You couldn't have known, of course. It was after you— He's dead."

"Oh, no! Not Al, Kit."

All their lives Martha and Al had been close, John thought. Surely there could have been a kinder fate that would have spared her this now.

"How did it happen?" Martha said at last.

"He told me about the message he wrote you, John. The next day he said he was going to the Board. But he never returned from the Institute. An accident in his laboratory, they told me. And they took his brain immediately.

"I didn't even know he had a contract. In the face of what he believed I can't imagine him taking out one but they showed it to me. I don't know what to believe but it all seems so horribly wrong and mixed up—Al just disappearing from me that way."

"We'll find him if they made a control of him. I don't think he would volunteer for that, knowing what he knew."

Kit looked up as if startled by a thought that was strange and unbelievable. "If you did that could I talk to him—just as I am talking with you?"

"Yes." And then he saw her face darken, and knew what she was thinking. Al, a poor remnant of a human being, a handful of neurons, blind, deaf, helpless—but alive.

Her face plunged against her hands again, and Martha and John did not attempt to halt her sobbing.

WHEN she quieted at last John said, "Did Al leave any of his notes and papers around here? That's one thing I would like to see. I want to try to understand just what he knew and how much he might have revealed."

"Yes. I have all his work here. There was a strange thing in connection with that. Before they notified me of his death two of his assistants came to the house and said Al wanted me to hide the papers they brought.

"They said he was with the Board at the moment and he just wanted these papers hidden securely. Soon after, word of his death came. I never saw the assistants again. I have not been able to locate them."

"That sounds as if Al almost expected something to happen!" said Martha.

"Show us his work. Please, Kit."

She put on a robe and slippers and went toward the door, glancing uneasily around at the ungainly frog hopping behind her. She led the way toward the opposite wing of the house and entered

the study that had been Al's. She reached for the light.

"Don't turn it on. I can see quite well in the dark."

"Why is it necessary?"

"If they would kill they would certainly steal. At least Al apparently thought so."

"Kill? I didn't—"

"You don't think Al died the way they said. Neither do I."

"But the Institute!" said Kit. "Surely they—"

"Isn't that what you've been thinking? Isn't that what you wanted to say back there in the bedroom?"

"Oh, yes, John! I've believed it and I've wanted to say it. But how can anyone say a thing like that about the Institute? It's—it's like the government."

"I don't know the answer but I think I can see how the Institute or perhaps some group within it would see Al's story as a threat to their personal power.

"We'll find the answer. Put his papers on the table for me, please."

The frog leaped to the top of the desk. Kit spread out her husband's research notes and data and turned pages as John read swiftly in the darkness. Occasionally he asked her to lay one aside.

"This is good enough," he said at last. "Hide them in the best place you can think of in the house. Tomorrow morning make copies of these I've separated and mail them to Jerry Randolph at News Central. Tell him Al left word that if anything happened to him the papers were to be sent there."

"Will they distribute such a thing as this?"

"That's what I want to find out. We want the public to know. If anyone is exerting pressure to keep the public from knowing we should learn about it this way.

"One more thing now before we go—will you let us leave you a couple of the frogs? We have more outside. It will be a means of communication between us and if we can find Al we'll let him have one."

Kit looked for a moment at the tiny monstrosity on the floor by the doorway. It was dimly visible in the faint night light coming through the window.

"I'll show you how to use it," Martha encouraged. "You'll get to love them so much you'll have them following you around all the time. All you have to feed them is a handful of grass once a day."

Kit grinned nervously in the darkness. "If you say so—and provided you let me name them Monster One and Two."

CHAPTER VIII

Too Hot to Handle

JERRY RANDOLPH wrote much more for the waste basket than he did for dissemination. It was there that his best critiques of modern society and the Welfare State were filed. He knew where they would go when he wrote them but he had to get the stuff off his chest and no one cared one way or the other.

If he wrote acceptable material it was used. He wrote sufficient of this to make it worth while to let him occupy an office as a writer. But, like other workers in the subsidized society, he had no worries about the essentials of living and his superiors had no worries about producing a profit. Jerry was perhaps one of ten in all News Central who even knew the meaning of that ancient word.

He entered the office before any of his fellows arrived. He slumped in a chair and scanned the pile of releases that the telecon had turned in during the night.

The insignificance of it sickened him. Trivial gossip, the report of new record gambling gains, the newest exploits of that maniacal Society for Artificial Dangers—

He expected little and usually found it. This morning, halfway through the pile, he almost tossed it all in the wastebasket without looking at the rest. Then a small story a couple of feet down

the roll caught his eye. He tore out the section of paper and read the stereotyped copy:

"C. M. Biglow of Pest Control announces the discovery during the past three weeks of two specimens of a new type of pest, which are froglike in appearance. They are considered to have been brought in from outer space and increased controls are being clamped on all vessels leaving and arriving on Earth.

"The first of these specimens was discovered in a bad state of decomposition near a home in Warrenton. It appeared the animal had suffered from Terrestrial climatic conditions with the skin almost wholly destroyed by actinic rays of the sun, to which it was certainly not accustomed.

"A second specimen was obtained after it had been freshly killed by a pet dog that had captured and toyed with it. Both were one-eyed creatures but the second had a mouth opening supplied with a vicious circle of teeth and a darker skin whose texture seemed able to resist sunlight. In contrast the first specimen seemed to have no mouth whatever.

"Residents of Warrenton, especially those in the vicinity of the spaceport, are asked to be on the watch for these creatures to capture, if possible, and report any that are seen."

This was the kind of thing that fascinated Jerry Randolph. He could write a harmless biting satire around such a bit of information that would shock as well as please the non-workers of the State. And because it pleased as well as shocked it would probably be passed by Editor Madsen and used.

Maybe it wouldn't be such a bad morning after all, Jerry thought. He sat before the writer, considering the item. He furrowed his brow thoughtfully, then began to write.

There were only two of them, Joe and his kid brother, and they were such little guys. They had come a long way out of space, because they had heard there was a big, magnificent world out there that belonged to the creatures who built the ships from the stars. Joe and his brother were only little guys, but they figured it out—

The faint klunk of mail in the chute disturbed him. He flipped the keys in irritation and opened the receiver.

He recognized a half dozen petitions by their stype of printing and tossed them away automatically. The last item was a letter that bore no familiarity. The return said Katherine Demming.

Demming—it sounded a little familiar at that. Then it rang in his memory. Al Demming, the cyberneticist who had been killed in his laboratory not long ago. He remembered Kit Demming. Al had had him out at the house once to give him a release on some new engineering.

He opened the letter and glanced at the brief notation.

To be released to Jerry Randolph in case of my death. Albert Demming.

It was simply typed. No signature and no other explanation. He flipped it over and began reading. His breath quickened as he comprehended the message that the cybernetic brains lived.

He finished the papers. He tried to picture the reaction of the minds. He could not imagine it—but he could write of it as it *might* be.

It was the story of the century. It would break the mighty power of the Institute of Cybernetics. It was one story that would not find its way to the wastebasket.

He glanced at the clock. Madsen would be in now. He picked up the papers and walked down the softly-lit hallway where faint music was in the air. He entered the door labeled: EDITOR-IN-CHIEF.

Madsen looked up, then let irritation flow out upon his face, building lines of vexation. "Hello, Jerry. I'm pretty busy right now. If you've got anything can't it come by tube?"

"Uh-uh—not this." He laid the papers on the desk. "Read it now. Read the first two lines and you won't be able to stop until you finish."

The editor glanced down. Like the rest of the newsmen he was a worker because he had chosen to be but he sometimes wondered why he rejected the subsidized life of ease and luxury that could be his for the taking. He wondered why he bothered with Jerry Randolph at all.

He hunched forward suddenly. Jerry smiled in grim amusement and watched the figure of his boss alternately tensing, then slowly exhaling in disbelief.

AT last Madsen looked up. "You knew this Dr. Demming, didn't you?"

"I've been to his house. He gave me a good deal of material in the past. He was top cybernetic engineer at the Institute."

"And now he's dead."

"With this kind of information in his possession I can believe there would be plenty of people who would *want* him dead."

"Randolph! If that's what you see in this story—"

"Why do you suppose he made a specific request that this be sent to me in case anything happened to him? It couldn't be that he *expected* anything, could it?"

"You don't realize what you're saying," said Madsen nervously. "You know the circumstances of his death."

He glanced down at the papers again and was surprised to see his own hands trembling faintly. "This is too big. It's too much without foundation as it exists now. The only thing we can do is to get Institute clearance on it."

"Can't you imagine them doing just that? You might as well offer them a knife and ask them to cut their own throats. They've got *power*, Madsen. Picture their reaction on hearing news like this."

"I *am* picturing it. There's been some mistake somewhere. Dr. Demming must have misunderstood his data. We can't disseminate a thing like this without checking with the Institute. I'll send these papers over for their clearance and whatever explanation they wish to give."

"Oh, no. Kit Demming sent those papers to me and I'm going to keep my hands on them."

Madsen's face grew red. "If you are going to persist in this foolish matter it is automatically your resignation as well."

"You have it now. You've thrown

[*Turn page*]

THE UNIVERSE BELONGED TO GEORGE MOFFAT!

HE WAS inspired, natty and optimistic the day he stepped down from the tramp space can to the desolate plains of Ooglach. Fresh from the Training Center of the Frontier Patrol in Chicago, on Earth, newly commissioned a constable in the service, the universe was definitely George Moffat's oyster!

For the next two years Moffat was to work with old Keno Martin, the oldest officer in the service. That didn't feaze Moffat. Keno Martin was a tough master—why, all the better! Nothing could lick Moffat! He was being sent to the forgotten end of nowhere—but he'd make his mark at Ooglach, the furthest outpost of Earth's commerce, the refuge of criminals! Follow the exciting adventures of this ambitious space constable in—

TOUGH OLD MAN

A Novelet of the Frontier Patrol of Space

By L. RON HUBBARD

•

Coming in the Next Issue—Plus Many Other Novelets and Stories!

away every honest word I've ever written up to now. But not this—this is going to be told in places where it will be heard by the right people!"

Jerry Randolph scooped up the papers and left the office. He cleaned up his own desk and walked out of the building for the last time.

An hour later he was dead.

John and Martha Wilkins saw it. The frogs were traveling cautiously beneath a thick hedge in a park across from the Institute building. They had come to the end of the hedge, facing a street, and John hesitated about bringing the frogs out into the open.

Then he saw the figure of Jerry Randolph. The newsman was walking slowly, almost idly, gazing at the huge block of the Institute as if trying to pierce its walls with his very eyes.

He started absently into the street. Almost simultaneously, John heard the faint whine of a speeding car. Jerry heard it too.

Martha screamed, "John, it's going to—"

It seemed to John that the car could have avoided Jerry. Instead it knocked him to the pavement, crushing him with the right front wheel. For a moment, John felt as if that crushing blow had landed upon his own body.

"We could have warned him. We saw it first," he said in self-accusation.

He went back over it. He could have sent warning that would have puzzled Jerry but would have saved his life. That speeding yellow vehicle—the whine he'd heard—the vision of the careening car *that had looked as if it would miss Jerry.*

"That was it," said Martha. "The car was on a path to miss Jerry. It *could* have missed him. It deliberately ran him down. We didn't sense that until it was too late."

There was a crowd gathering now. The murder car had stopped and the driver was approaching the scene. He walked with arrogance as if he'd just eliminated some vermin. They'd believe him, John thought. They always believed his kind. No one else had seen it. There would be no testimony that the car had swung deliberately into Jerry.

The scene brought remembrance of terror back to John. He thought of his own accident, his car crashing down the mountainside toward the river's foaming whitecaps.

He remembered how it had been, driving around that curve, meeting the speeding car head on—a speeding yellow car like—

Martha cried out suddenly, "John! That man—that face!"

He stared. His thought processes froze. And then a slow flame seemed to eat through his being.

He remembered that car. He remembered that beefy arrogant countenance. He had glimpsed it once before, sunlight splashing upon it as it sped around a curve—a look of murderous intent twisting it hideously.

CHAPTER IX

Blind Plunge

THE frogs moved carefully back, farther under cover of the hedge. John abandoned contact, withdrawing his powers into himself. He recoiled from the evil and the violence that swirled about him. Whose word could a man trust, he thought. Was there no hand that would not strike down his neighbor at the slightest whim?

"John!" Martha recalled him gently. In some ways her spirit withstood the blunt fury of existence better than his.

"Remember what Thornton Henniger said that day when we signed our contracts?" he said.

"I remember," said Martha.

"I don't know how—but someday I'll kill him."

"No! That's not our purpose, John. Remember—you lifted me up and showed me what we must do. This isn't it."

He recalled the names of scientists he had known—men and women whose ca-

reers had been cut short by inexplicable accidents.

There was Foster, the physicist, who had been drowned on a lonely stretch of beach where he often meditated. Foster had been an expert swimmer.

There was Bruning, the biologist, accidentally shot during a hunt in Canada. Espard, the astronautical engineer, had been killed in an unexplained laboratory blast.

The catalogue was long. As far as he knew and as far as he could recall the brain of every one had gone to the Institute.

It was more than he could believe, a worldwide program of murder of the geniuses who stood as the sole contributors to civilization in a barren age.

But the memory of a sunlit day and the face of a maniac plunging murderously toward him would not let him deny it.

Night had come when all traces of the accident had been cleared away. The curious had dispersed and few passersby were about.

Most functions of society were carried on through daylight and dark to accomodate a citizenry that was bound no more by clocks. There were as many who slept by day and lived by night as the reverse. The Institute was no exception in serving such a populace. Its doors were always open to those who had business with it.

John watched the constant but small inflow and outflow of people. He moved out from the cover of the hedge to estimate the possibilities of getting in undetected.

Suddenly the eye of a frog took in the lighted news kiosk on the corner. It was only a momentary scan, but John's attention absorbed a single line of it and the frog came to a standstill.

A NEWSMAN'S LAST STORY

He stopped, looking cautiously about, then the frog leaped to a projecting rail about the kiosk. It was Jerry Randolph's story.

News Central had told of Jerry's death with maudlin sentimentality and included the bare beginning of the story that he had started to write that morning. Below it was the official account of the new pests discovered by the Interplanetary Pest Control Bureau.

"John—get the frog down!"

Pests—subject to eradication procedures. He dropped them into the dimmer shadows. He hadn't dreamed the two lost frogs would bring such a tragic reaction.

"We'll have to keep them completely out of sight now," said Martha.

"Maybe we could change the form—give them legs or let them crawl like a snake. But the jumping motion is the simplest to control."

"Let's not worry about it now. Let's risk the continued use of the frogs until they're destroyed or we reach our goal."

They led the frogs swiftly across the street in short rapid hops that kept them in the shadows. They abandoned all hope of taking them into the front hall of the Institute.

At the rear of the gray block was the technical and emergency entrance where the bodies of dead men came from all the world to be prepared for restoration to life in eternal abandonment. Some of these were rushed from nearby centers as soon as death occurred from accident or occasional rare disease. Others came from far continents where they had first been treated at Institute centers to prevent deterioration of the brain cells.

The frogs lay in the shadow of the dock, where a pair of coffins were being unloaded. "We had better take just one inside," said John. "The other can be left out here."

A single android laborer, directed from a central cybernetic control, was unloading the boxes from the truck to conveyor rollers that led to the elevator. The frog edged closer as the first coffin approached the entrance.

The laborer's back was turned. The frog leaped atop the coffin and rode into the dark interior of the elevator shaft.

"Do you have any idea where to look for the records department?" asked Martha.

"No. We'll have to hunt."

"It might take days of random hunting, keeping out of sight. Let's stay with these coffins. Incoming brains should involve records."

BY infrared the eye of the frog viewed the walls of the shaft as the freight elevator rode upward. John scanned the appearance of the floors as closely as possible, but there was no clue to where the records might be. He agreed with Martha. A random hunt among the building's ninety floors would be vain.

The elevator stopped at last. Almost instantly a panel opened opposite the box and the conveyor started rolling it off. The frog dropped behind the coffin, out of sight of anyone who might be waiting for it. They saw the legs of a table and the frog leaped for its protecting cover as the panel slammed shut behind.

The sound of voices registered through the aural diaphragm of the frog.

"Two more, and then we can go home?"

"Right. These are special jobs for the Metaral Mines in the Arctic. Something happened to one of the brains up there and they want two replacements to check on the circumstances involved. Something to do with low-temperature operations."

They opened the first coffin. The second speaker whistled softly. "Boy, do they beat these guys up!"

"What do you mean, beat them up?"

Sudden tension, so sharp that John seemed to feel it through the frog, filled the room. "Forget it," said the technician. "I didn't mean anything at all."

"Then that's probably the first time I ever heard you make meaningless noises, Kraft."

"Ah, you know what I mean. You don't think these accidents we get all the time just *happen,* do you?"

"What are you driving at?"

"This is a dirty business we're in. Why do you think so many accidents mangle the bodies and leave the brains intact? It takes technique to do that!"

"That can't be true!" the other said faintly.

"I'll bet Kraft doesn't live till morning," said John. "He must be a fool to talk that way." The entire building was undoubtedly wired with watch circuits.

But the poor devil wasn't to be helped now.

John and Martha watched the technicians hoist the battered bodies onto operating tables. They cut open the brain cases and tore away the bony structure. Then, carefully they severed the great nerve connections and freed the brain from the body.

They lowered the brains into a sealed chamber of nutrient and preservative for the journey to the point of installation where a cybernetic engineer would take over. Cleanup was a swift dumping of the bodies into a disposal chute, a gathering of instruments into a boiling bath.

"That's the way it's done," murmured Martha.

"The way to make a machine out of a man."

"I'll show you how to fill out these records and then we'll be on our way," said Kraft.

The two bent over a table and hastily scratched notations on the forms that had come with the bodies and made out some new sheets from a supply desk.

These they finally rolled and slipped into a tube. They put the tube into a repository and it shot from sight. The room darkened as they went out the door.

"Did you see that?" exclaimed John. "A pneumatic carrier. I'll bet it goes directly to the records department. And the frog will fit it!"

The frog jumped to the desk. John and Martha examined the repository. There appeared no control by which the destination of the carrier could be changed. That meant the tube led to a single location. It was worth gambling that it went to the records section.

The lid was closed, of course. With a partial vacuum inside it probably took some pressure to open. The frog moved directly beneath the small lid fitting beneath the flare that served as a handle. It jumped. The lid opened momentarily

and snapped shut, flinging the frog in a wild tumble across the desk.

John righted the frog and looked about for other means to get in. Martha said, "It's got to be higher. Those books—"

A row of books stood erect at the back of the desk. The frog jumped to the top of them and wedged between the wall and a book. A hard kick sent the book tumbling to the desk. The frog then backed against the thick book and gave a series of short quick pushes. That put it just under the edge of the lid.

On top of the book the frog approached the lid and grasped the flare-tip in its teeth. Slowly, John caused the twin muscles to contract. The lid raised.

"Now all we need is six more sets of muscles," said John.

"A backflip," said Martha. "It'll work."

He considered the maneuver, estimating the power of the spring and the suction on the lid, the speed of its snapping shut.

Suddenly he released and contracted the jumping muscles sharply. The lid opened a fraction farther than before. The frog turned a quick somersault and landed in the mouth of the tube. The lid slammed shut. The body of the frog filled the area of the tube nicely. It plummeted through the blind maze with the speed of a dropped rock.

CHAPTER X

More Trouble Coming

JOHN was forced to relax contact during that plunge. The wild gyrations and the vision of helpless falling caused vertigo that made him sick. Martha remained out completely but he cut in at short intervals. He sensed the increasing speed of that plunge through darkness but nothing could be done to slow its dangerous velocity.

If he could have maneuvered it to press against the side with the jumper muscles—but there was no maneuvering that blob of artificial flesh in such a spinning dive.

Abruptly then, there was motionlessness. He wondered if he still had vision after that crushing halt. He made full contact. There seemed to be no damage.

He was looking at the sides of the receiving basket into which the frog had fallen. Beyond that there was a girl librarian. Her back was to the frog but she was in the act of turning around.

The frog leaped to the floor and scurried to the farthest corner of the wall beneath the desk. From there John could see the feet of half a dozen library operators. He heard the voice of one of the girls.

"I was sure I heard another carrier drop out of the lab tube a moment ago. Did any of you pick it up?"

"There could be no more than one. I heard Delaney say that he expected only two brains this shift."

"I must be dreaming." The girl leaned on the desk and returned to her work. "I wish I knew how to find the information they want on the original Metaral Mine installation. Sixty years ago they didn't file this stuff worth a hoot."

Martha joined John. "Can we get to the indexes now?"

"I don't see how. Let's watch a minute to see how they operate."

From beneath the table they watched the legs of the girl as she shifted weight from one foot to the other in irritation and indecision.

Try Al Demming, John thought. If he could only get one of them to open the indexes for him. The frog could not operate the machines even if no one were present to interfere.

The girl shifted and stood erect. "What did you say, Louise?"

"Nothing."

"I thought I heard somebody talking to me. This thing is driving me crazy."

He'd better cut that out, John thought. He had let the impulse of his thought get through to the frog. It had been strong enough to impress the girl.

"Why not?" said Martha suddenly. "Let me try."

The girl was tired. A low-level impressed suggestion *could* seem like her own idea. Gently Martha let the impressions of her mind flow outward through the telepathic synapses of the frog.

Albert Demming—*try Albert Demming—Dr. Albert Demming—*

At the lowest possible level of neural activity she repeated the name over and over again. The girl remained standing there, punching the manual indexes on the table. She shifted her weight and twisted one foot, then the other. It seemed useless but Martha dared not increase the intensity of the suggestion.

She was on the verge of abandoning the effort when the girl turned and walked slowly toward the chair before her position at the index panel. The frog shifted to one side to be in line with the screen.

The girl seemed to hesitate in wonder as if she had forgotten something. *Try Dr. Albert Demming—*

Her fingers began to type slowly but without hesitation. An index number appeared. She blanked it and punched the number on the keyboard.

Almost instantly a sheet of information appeared on the screen. John and Martha grasped the name—Al's. There might not be time to read it all; they scanned swiftly to the last line: *Experimental, Secret, 93 C.*

"Right here in the building!" John exclaimed.

They had scarcely caught the information when the girl blanked the machine with an irritated swipe of her hand.

"I don't know what made me do a fool thing like that."

"What?"

"Oh, I just looked up some crazy name that didn't have anything to do with my problem. That's the third stupid thing I've done in the last hour. I'm going out."

John felt Martha's probing telepathic call searching upward and outward through the mass of walls and furnishings of the building. *Al—Al—can you hear me?"*

"Wait," said John. "Wait until we can move the frog near him. We don't know what kind of circumstances he may be in. It might be better not to call."

"You mean—because of the experimental lab?"

"Yes."

HE felt the chill of fear within her again, mingled with bitterness and rising hate that threatened her single-minded drive.

"We can get out when they change shifts," he suggested. "Most of the girls ought to be out at one time. There's probably a tube that goes direct to the lab."

It came eventually. They saw girls scurrying out the doorway. A single attendant was left to watch over the index machines. They waited until she was at the far end and made a try.

The tube in which the frog arrived was only one of a long series, labeled with their destinations. They found the one leading to the experimental laboratory in the center of the long row.

The operator was returning. The frog looked about and shoved a stack of papers beneath the opening. They slid askew but there was no time to improve the base on which the frog stood. With the experience of the previous maneuver behind him, John quickly repeated it. The cover slammed shut. His last vision was of the operator slowly turning about. He glimpsed her face but her eyes—he didn't believe they had been upon the frog.

Prepared for the violent drop into the receiving hopper the frog leaped instantly to the floor at the end of the plunge and scurried for the nearest dark corner.

They had made it, John thought. Before him, in the center of the laboratory, were the familiar pedestals of equipment which supported and fed cybernetic brains. There were four of them. He scanned the surfaces of the platinum boxes as well as possible from the hiding place.

Al was there.

He could not guess why Martha's brother had been brought here but he

was here and alive. The meters on the panel and the visual check tubes showed the flow of vital fluids through the arteries of his brain.

Martha saw it, too. *"Al—"* she cried, "this is Martha. Martha and John. Can you hear me, Al?"

There was no response. Only the dead silence that had always led to the belief that the brains were dead.

"Al!"

They could hear the faint clatter of instruments wielded by two technicians at the distant end of the laboratory. Martha brought the frog dangerously out of hiding, placed it directly beside the pedestal where it could look up at the platinum box. Her signal was like a scream.

"Al—answer me! Can't you hear me? What have they done to you?"

Only silence and motionlessness marked the machinery and the brain before them. Then they heard the scuffing feet of the technicians. The frog hopped swiftly back to hiding.

"They've killed him!" Martha sobbed. "You were right—we'll find a way to strike back at them."

In his turn now John calmed the blind rage in her. For himself he had gone beyond it. There was no rage in him now. His sole function was to destroy that which surrounded them. Rage could not accomplish it but rage had initiated it. Now clear cold reason would carry it through.

The blank wall that faced them now seemed vast and terrifying and unyielding. With Al dead they had lost his help and understanding and the one human contact that he had offered originally. John wondered about the two technicians Kit had mentioned. Perhaps they knew enough of his work and could serve as the needed human contacts.

There was Kit herself, of course, but she lacked the training and authority that had been Al's. With the frogs detected and marked for extermination John felt powerless to move.

An opening door at the other end of the room drew their attention. A somewhat stooped white haired man in a soiled laboratory coat entered. He spoke briefly to the two technicians and they went out, leaving him alone in the laboratory.

"That's Dr. Seymour Jurgens," Martha said. "Al introduced me to him once."

"I know. He has done great scientific work. How can he be Chairman of the Institute Board—directly responsible for the death of Jerry and Al—of you and me?"

Dr. Jurgens walked slowly from the other end of the room. He approached the mass of equipment surrounding the brain of Al. Motionless for a long time he looked at the platinum box in silent speculation.

THEN, as if making up his mind suddenly, he went to a nearby bench and picked up a small object, half the size of his fist, which John and Martha had not noticed until now. He held it in his hand and looked down at it. He spoke toward it.

"This is your final chance, Al," he said. "I know that you are watching me and listening to me. If you refuse to answer I will be forced to turn off the nutrient flow."

"John—what does it mean?" Martha cried. "Do you think he's found a way to communicate with the brains? But Al can't be alive or he would have answered us."

"I don't know. Wait."

"You will not have another chance, Al." Dr. Jurgens' face was flushed with rage as he gripped the instrument in his hand impotently. His fist clenched as if he would vent his anger upon the helpless brain.

Then he moved toward the instrument panel that controlled the nutrient flow. His hand touched the switch that would turn off the pumps.

"Stop!" Martha cried. "Stop it—you *murderer!"*

Sick at Martha's impulsive betrayal of their position, John waited for Jurgens' move. Al might be dead, and now their own abilities were revealed to the cyberneticists.

"I couldn't help it," Martha said. "What if Al isn't dead? *He* wouldn't be acting that way if he were, would he?"

"It's all right, darling," John murmured. "We ought to get the frog out someway before he finds it. It would be better for them to go on thinking the frogs are some interplanetary pest."

For what seemed a full minute Dr. Jurgens stood motionless with his hand on the switch. Then slowly he turned and moved back, watching the machinery and the box and glancing about the room speculatively. He went to the bench and bent over the small instrument he'd carried in his hand.

"Tell me quickly," he said. "Tell me—can you hear me? Is it telepathy you use? Is my message strong enough to hear?"

Then they realized that he had not spoken with his lips but only in his thoughts. He was trying to reach them by the same pathway that Martha had called out to him.

"John," said Martha helplessly.

John remained silent. The message came from Dr. Jurgens again. "Believe me," he said urgently. "I have done what I had to do. I cannot speak orally. Every laboratory is wired with watch circuits. I want to help you but I cannot betray myself by speaking."

He continued to lean over the bench as if studying the instrument, but even his back seemed to convey the impression of tension that was within him.

"Shall we answer?" said Martha.

"Yes. He knows of us. He may be lying, trying to trap us, but we'll have to take that chance."

"He *is* lying! Get out, you fools! Stay as far away from here as you can."

It was the voice of Al. Martha's spirit seemed to crumple with relief. "Why didn't you answer?" she cried. "We thought you were dead."

"Get away from here!" Al repeated savagely. "If you can do anything to help the mass of cybernetic brains, do it. I'm helpless. They've got me trapped here for experiments they hope will betray you all. Don't ever try to contact me again!"

"Al," said Dr. Jurgens. "Will you believe me if I tell you that at this moment an agent of the Institute is on his way to attack your wife, Katherine? It is to be made to appear a suicide after he destroys all your records.

"Whoever the rest of you are, whose voices I hear, can you do anything? Do you have power to intervene? I cannot. If you can make contact with those who can, do it quickly."

"Kit!" Al cried out in despair.

To John's mind came the instant memory of the crushed body of Jerry Randolph, the image of a malignant countenance, of a figure hunched over a wheel, driving murderously around a curve.

How had he forgotten that Kit too, with her knowledge and the papers of Al, was an enemy the Institute could not overlook?

CHAPTER XI

Attack

JOHN connected almost instantly with one of the frogs left with Kit. It was in the house, in Al's study.

Against the far wall Kit cowered in terror beside Al's desk. In front of her was the massive figure of a man who advanced with menace in every line of his body. John couldn't see the man's face. He didn't need to. He heard his voice. And he cursed again his own stupidity in leaving Kit unwarned and unprotected.

"You sent copies of your husband's papers to Jerry Randolph," the man was saying. "I want the originals and all other records of his. They disappeared from his office at the Institute."

"No, I don't have them!" Kit tried to back farther into the corner.

"Get them, Kit," said John suddenly. "Get them and give them to him. They don't matter any more."

A sudden start of surprise showed in her eyes. She glanced frantically about the room to find the unseen frog from

which the words had come.

"Careful," John warned. "Don't let him know."

But the assassin had mistaken her wild glance. "Don't try to run, please. I don't want you to earn yourself any marks or bruises."

"I'll get them," she said in a hurried whisper. "All my husband's papers are in the bedroom—in the cabinet there. Tne key is one—five—three—eight, frequency A."

"Thank you. That makes it much easier. You will lead the way please."

She crept along the wall, keeping her eyes on the intruder. As he turned slowly, watching her with cruel amusement, John and Martha saw his face. They had not been mistaken. It was the same man who had forced their car over the cliff, who had killed Jerry Randolph.

John backed the frog out of sight as Kit led the way through the door. He followed cautiously with it as they went toward the cabinet in the bedroom. The man opened the electronic lock according to Kit's instructions. He took out the sheaf of papers that lay on a shelf. After a moment's glance he stuffed them in his pocket.

With a swift motion then he grasped Kit's arm and twisted her onto the bed. He bound her tightly with a sheet almost before she could cry out. He gagged her mouth.

"I hope I didn't make any bruises," he said. "This has to look just a little bit like a suicide—not that the police will investigate too closely but there are certain forms that have to be gone through. I'll need a sample of your handwriting now."

He walked back to the cabinet from which he had taken the papers. Martha was crying with rage and despair. "John, can't we get help to her somehow Can't we send the frogs?"

"Neighbors are too far away. The frogs can't use a phone. There's not any way to call out."

"We can't just watch him kill her!"

"No—let me handle the frog. Make no attempt at control. *Now!*"

The frog crossed the room in a long leap. Instantly John knew he had made a mistake. The man saw the gray streak of motion out of the corner of his eye and turned in astonishment. He shifted to one side but the frog struck his face.

The razorlike teeth caught in the flesh and raked a long, deep furrow but John released the jaws and let the frog tumble to the floor.

It righted and turned and leaped again. But the killer had already reached to his hip. His hand shot out with a long blade. He impaled the frog in mid-air.

Kit gave a muffled sob. The man looked at her sharply and then back at the quivering lump on his knife.

"This is what is supposed to be a pest from interstellar traffic, isn't it?"

Kit stared at the frog with terrified eyes as he slowly drew the blade out of it.

He turned it over in his fingers. Only a thin, watery fluid oozed out of the wound. "I wonder how much you know of these," he murmured.

[*Turn page*]

AMAZING THING! By Cooper
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THE knife had not destroyed the telepathic or vision faculties of the frog but it had cut the elementary muscle structure that gave it mobility. Helplessly John and Martha looked into the face of the attacker.

John said quickly, "Where is the other frog, Kit? We'll try to use it—and not make the same mistake again."

"In the woods behind the house. I was amusing myself by exploring with it just before he came in. Did you find Al?"

"We know where he is. As soon as we get you out of this you can talk with him."

"What can you do? He's going to kill me because I know about the brains being alive. He said Al's assistants are already dead."

"I've got to get the other frog."

In the moment before he dropped contact he saw what the man intended. He had a small handwriting duplicator and was preparing to make a suicide note that would faithfully copy Kit's handwriting. It would be left beside her body. He could guess the kind of thing that would be written. Al's death would serve as reason enough for her suicide.

He scanned the nearby territory for contact with the remaining frog. Al's suburban place was isolated amid encroaching forest and meadow that separated him from his fairly distant neighbors—a span too great to be crossed by the frog in sufficient time.

He located the frog in a patch of grass at the edge of the wood. He took control and led it in the direction of the house.

Almost instantly there was a shout some distance behind.

"Hey, look! There's one of those pests they've told us to get. He jumped in the air toward Demming's. Get a rock!"

Children playing in the woods, John thought. A few moments ago he would have been thankful for their presence. Now they loomed as a new menace. In the depths of the grass he couldn't see how far away they were.

He tried to propel the frog forward with long low jumps but the creature was conspicuous in any kind of movement. He tried to gauge how far he had to go. It looked at least two hundred meters. He stepped up the power of his legs. Behind him increased shouts and the sound of running showed he had been seen again.

On the next leap the crushing impact of a rock hit the frog in midair. John's vision twisted erratically as it crashed to the ground.

"I hit him! Come on, he's over there in the grass. I hit him square!"

The rock had hit on the back, where thick padding of tissues protected the sensory organs. The frog hadn't been seriously hurt but he couldn't avoid leading the children toward the house.

He had no knowledge of whether the killer would attack the children or flee at their approach—with the intention of finishing his work at a later time. He had no desire to risk the lives of the children or of Kit unnecessarily—but the man could not be allowed to escape now.

He knew the secret of the frogs. That muffled cry from Kit had told him all that he needed to know about them. From him the information would go to the Institute. It would assure Kit's death and the destruction of the brains of Al and Martha and himself.

He heard the approaching steps getting nearer. He had to get to the house well ahead of the children.

The frog leaped for the cover of taller brush that led almost to the edge of the trimly landscaped grounds at the rear of the house. With abandon John forced it to highest speed. A dozen times it collided with entanglements and tumbled helplessly. But the thicket impeded his pursuers even more.

When he at last reached the smooth sloping lawn he had left them far behind, beating the thicket to drive the frog out of cover. He heard their cries as he led it across the lawn.

He entered cautiously, muffling the faint plopping sound of its movement on the thick rugs. He came to the bedroom, where Kit was still prisoner. For a thick moment of anguish he feared he had been too late. The assassin had moved Kit to a chair by the desk. The

suicide note lay upon it. Kit was bound only by her hands and feet with broad strips of sheeting. Knife in hand the man was bending near her.

"Kit! Look at me!" John cried.

Her response was instantaneous. Her eyes opened wide in a look of despair for hope that was beyond reach. The effect was as John planned.

The man turned, his face snarling.

FROM the center of the floor the frog leaped. The knife flashed up, but John had anticipated its arc. Bulletlike, the frog shot under it, crashed into that raging face—and clung.

The killer erupted a scream of rage and pain. He tore at his face with his hands. He ripped the frog loose and hurled it across the room. But most of one eyelid went with it, clamped between those nightmare teeth.

He stood for a moment, blood pouring over his face from his blinded eye.

The frog lay crumpled on the floor. John dared not test its movement for fear of breaking that peak of unreasoning rage in the attacker. If it diverted one moment from the frog to Kit he could kill or mutilate her with one slash of that knife. One instant of misjudgment now would be fatal for Kit.

Then the man was coming slowly toward the frog. John's tension eased. The killer had forgotten Kit for the moment and all his rage was for the creature that had blinded his eye.

John did not know if the frog had been injured by the impact against the wall. The vision was still good. He waited for the moment to test the muscles.

The knife started its downward plunge before he made a leap. He landed high upon a bookshelf set in the adjacent wall. Cursing obscenely, the man wrenched the knife from the floor and whirled.

Then, with his more sensitive hearing, John caught the sound of the children who had pursued the frog. Their lives as well as Kit's might be forfeit if they broke in now. He'd have to make the kill quickly.

He wondered why the man made no attempt to shoot. Apparently the initial purpose of his coming still guided him. He wanted to get away without marks of violence in the house, that would leave indications of other than suicide.

The frog lay atop a bookcase, motionless, at head height. This was it, thought John. There would never be a chance after this one.

By the last defensive jump he had led his opponent to believe the frog might be hurt. He maintained that illusion by continued motionlessness as the man approached.

He watched the knife arm draw slowly back. Sunlight glinted on the blade. The man's head was raised, his neck exposed from jaw to collarbone.

The frog leaped.

Deeply the long vicious teeth slashed into the neck. John clamped them shut and moved them in a slow grinding chewing motion. He had aimed well. Vision became a red haze as blood gushed over the eye of the frog. The man fell to the floor, clawing. His fingers slipped in the gushing blood that covered the frog.

At last he tore it away, only to expose the gaping, bloody well in his throat. His fingers crushed about the frog, squeezing its substance through them. John's last sound was the commotion outside.

"Mrs. Demming—Mrs. Demming, we saw one of the pests in your place! May we look for it? *Mrs. Demming!*"

CHAPTER XII

Unequal Contest

CAREFULLY, as if taking him by the hand, Martha led her brother's mind to contact with the injured frog that was still capable of sight and telepathy.

The children had freed Kit from her bonds and were calling for the police. Al looked upon Kit. It was moments before he could trust himself to speak. Then he called her name softly.

Kit's answering cry was uncontrolled hysteria but Martha left them. There was nothing she could do to help them through the terrible minutes at hand. She knew—

She returned to the laboratory and started a half dozen more frogs on their way to Al's house and the same number toward the Institute so that adequate communication could be had between them.

John returned to the Institute laboratory where Dr. Jurgens remained in the same pose of studious intent. Silently John watched him. He seemed but a tired old man whose days were very short in number. Yet he was the key figure in a violent deception upon which the destiny of millions of innocent people depended.

The question remained, however, who was the deceived?

"How can I trust you?" John said abruptly.

The scientist's body jerked with a start. "You found I spoke the truth?" he said anxiously.

"I killed your assassin. Perhaps you would sacrifice him to make contact with us."

"Undoubtedly," said Dr. Jurgens. "That would be a trifle—if I were one of *them*."

"I don't understand any of it and I don't think you can explain it. The killings—your knowledge that the brains live—and no action in the face of that knowledge. Even if you were madmen—which you must be—it would not be understandable."

"I'm thankful you were successful," he said fervently. "For Al's sake and Kit's. She's a lovely—child. I always think of her as having found the secret of how to remain upon that sharp line of just beginning to grow up—and never quite crossing over.

"I came in here today with the intent of forcing Al to communicate with me. I wanted to let him know of her danger in the hope that he might be able to do something. I suspected he was in contact with others and that you might have human contacts. But he hates me—with good reason—and will never trust me. I'm glad for him that you came."

"Why was Al deliberately killed and his brain taken? If there is an answer to that I would believe that Hell's clinkers have grown cold."

Dr. Jurgens gathered tools and busied himself. John kept the frog carefully hidden under the table out of sight of such watch circuits as might be upon him. He wondered how much had been seen when they first brought the frog in.

"I discovered the brains live," said Dr. Jurgens, "three years before Al did. Without thinking of consequences I rushed to the Board, just as he did. Like you I was unable to comprehend the reaction. I was astounded and embittered—but I kept my feelings to myself.

"Immediately the government seized control of the Board. The scientific members were retained merely in an advisory capacity. Some sided with the political faction. Others, like me, submitted to the pressure that could not be ignored or fought.

"Al's death was the greatest tragedy I have yet had to witness. He refused to be dominated by the Board's decision. It has been agreed that this secret cannot be given out. He had to be eliminated. Those of us who were horrified by it were helpless. We go along waiting for the day when the system can be overthrown. *That day has come!*"

"I agree with you," said John drily, "but you noble rebels on the Board have done little to bring it about. From how high does the pressure come that keeps the Board in line?"

Dr. Jurgens ignored his thrust and answered the question directly. "The very top. The President, the Secretary of Welfare and half a dozen others know it. It's the top secret of the whole government."

"They would keep two million slaves to preserve their power," whispered John. "How uneasy their sleep must be when just one shouted word of this secret, which would cover the Earth, would topple them from their high places."

"No," said Dr. Jurgens sadly. "That

is where both you and they are wrong. They fear it and you hope it but both the hope and the fear are false. If all the world knew it there would not be a single change!"

"That's insane! The people would wipe out the government in total anarchy if they suspected their leaders knew of this thing and had kept it secret. For the people's own good it would be best to refrain from that revelation.

"When they know merely the fact that the brains are alive they will force such changes that no governmental power can withstand them. Tell the people! That is all we need do!"

"How little you know of your own people—how little you understand them! Suppose they did know—what would you offer in exchange for the present?"

SAID John, "Electronic cybernetics."

"You know that failed once. But it would be worse now. Our technical class has all but disappeared. The manning of an electronic system is now an impossibility—and they would know it."

"It will have to be made possible," John said. "If it is ruled out what other answer is there?"

"The one we scientists on the Board have dreamed of for so long. The one that you have brought into the realm of possibility—destruction. Let each brain wipe out its own facility which it controls. Its own sacrifice would follow—but that would be the one and final answer."

"And an end to the Welfare State."

"Of course. Of all man's failures the Welfare State, the right of subsidy, is the greatest. Its illusions are the most dismal, its goals the most ignoble."

"No. Such a program sounds like the product of a disordered mind. It's pure fantasy to think of bringing such chaos. I hold no brief for the Welfare State—neither would I assume the destiny of destruction. Man can work that out as he will. I ask only freedom for my poor slaves."

"You fool!" cried the Board member. "You will throw away the one chance that has come like a miracle. Give me the means—let me talk to all the brains. Let me see if they are so noble or whether they would be willing to see man pass through a purifying barbarism in order to be rid of this system."

"No," said John. "It will be done my way. And this attack of the Institute upon Kit is exactly the leverage we need."

"What are you going to do? In the end nothing will save her from them unless you act as I have suggested."

"I think the Institute will be most interested in seeing that no harm comes to Kit. Tomorrow she goes before a dependent justice of the World Court. She will charge the Institute with the murder of her husband and an attempt upon her own life. Al's papers and his proofs of his theories will be part of the testimony that will be shown to all the news screens of every continent."

"You wouldn't dare!"

"And, unless you are lying to me, you and your fellow rebels on the Board will appear to testify of what you know in support of the charges that Katherine Demming will make against the Institute of Cybernetics!"

Never had a battle been fought on more unequal grounds, John thought—the defenseless cybernetic brains challenging the mighty Institute that held them inescapably in its power, not merely the Institute but the government itself.

One factor lent some equality to the struggle. This was the fact that the Institute was obliged to maintain the functioning of the brains as the foundation on which the whole unstable society was built. The Institute could do nothing that would hinder or destroy that functioning.

The following day the brain of Al was returned to the plant over which he had been initially in control. Martha was intensely relieved though there was little cause for great joy. Their power was scarcely less at that distance.

Al showed them the facilities that were his.

"This is where I made my mistake," he said. "When I first came here I had

the same thought you did—communication with the outside. I considered telepathy but I had no way to implement it. Next best was an electronic auxiliary. It depended on radiated energy. They picked that up in a hurry.

"Dr. Jurgens threatened and stormed for days trying to get me to cooperate so that they could talk to all the brains, find out their state and nip any revolt ideas. That is still his purpose with us. He lied with every word he said when he told you about a rebellion against the Board. I know—I watched him order my execution!

"They believe there is already widespread communication between the brains. They suspect and are scared stiff of the fact that some concerted revolt may be in the making. With his cock and bull story he wanted you to tell him if such is the case. If he knew that there are only the three of us—"

"Can we be sure of that?" said Martha. "Why have we been able to exercise independent control over the facilities? Maybe others have done the same."

"No," said Al. "I've thought a great deal about that. I think that we are different from the rest. I used a heavier electronic forcing field to break down your block after your adjustment collapse, John.

"This served to eliminate circularity of thought and undesirable feedback. In turn this has freed vast blocks of neurons which even the most 'normal' of us use in pathological circulating memories. These were freed for productive use.

"It has thus raised your I.Q. to tremendous levels and increased your initiative and courage. Your powers are superhuman in comparison with what you were before. Think a moment. How long would it have taken you to synthesize the frogs before the accident?"

FOR the first time John thought back, considering the magnitude of the problem. What Al said was true. He had accomplished work in weeks that should have taken a lifetime.

But he almost laughed. "I don't feel much like a superman."

"Neither do I," said Al. "But we must be. The electronic gadgets I built would have taken an ordinary twenty-man lab ten years to develop. I did it in about three days.

"For me and Martha the explanation must lie in the fact that the Institute read my notes on this effect. The engineer who did the work of installing our brains set the forcing field at the same level because he respected my work more than he understood it. Perhaps all of them will be the same from now on—if we fail to prevent the continuation of new installations.

"And we *will* fail if we trust Dr. Jurgens!" Al finished savagely. Never could he forget that face that had watched, a table length away, while he crumpled in agony from those shots in the back.

"Suppose you take control of all frogs in the Institute?" said John. "You can watch Jurgens as closely as you like but you'll have to keep the frogs out of the way of the watch circuits. Take the ones also that are watching Kit. Increase them to at least a hundred and place them around the house in the brush and the trees."

"But what do we do if all this fails? What are we to do then?"

"If we let the people know then we have done all that we can do or all that is necessary. They will take care of the rest."

"You have too much faith in the 'people,'" said Al. "The 'people' are like a wild uncertain animal that would as soon rip and destroy a bed of tender flowers as pass it by. We need much more of a weapon than such blind trust."

"What else?"

"Suppose every cybernetic brain could be like us? Not every one either. Just a few key controls in critical plants. Suppose we could increase their forcing fields and give them power over their plants such as we have—and *then* let the people know! If our demands are refused we can strike. Cut off their precious supplies for a few hours or days. Then we'll see action!"

"We can't do it. We haven't the time or the facilities—and it's wholly unnecessary. Perhaps if it ever came to such an extreme—but we cannot waste our energies now. Kit is at Court, and we should be with her."

"All right," said Al. "I'll go along for the present but in the end force will probably be the answer."

It was almost a barren room. The center of the polished floor as it led away from the entrance was unoccupied. Beyond the center was the single ornate platform on a slightly raised dais.

Against the walls on either side were a half dozen desks occupied by writers, recorders and technical men. Here was the video equipment that put the interior of this room within reach of every corner of the continents of Earth. Here were the mechanical eyes and ears that joined this room with twelve others of identical appearance to form the Court of World Justice.

Behind the central desk Justice Underwood seemed like a man who had lived much of his life in another world, apart from the subsidized wealth that smothered the citizens of his age. His face seemed the face of one who had compounded wisdom out of materials no longer among the resources of his day.

He looked up slowly from the paper he had read. Steel graying hair matched the serious glint of his eyes as he looked before him.

"You are Katherine Demming?" he said.

"Yes." Kit stood before the desk. She trembled with nervous reaction to her experience of the night before and the magnitude of the task before her now. She felt the reassuring contact of the frog in the pocket of her slack coat.

"You bring these charges before the Court of World Justice—that the Institute of Cybernetics caused the murder of your husband, that it attempted your own life after its agent robbed you of papers detailing your husband's researches."

"I make those charges," said Kit solemnly.

Across the country a thousand news selector operators suddenly blanked the screens they were feeding. From the somnolent task of selecting the most portentous of the horde of trivial items of gossip at their command they awoke with a shock as Kit's words rang unbelievably in their ears. The most alert of them were able to switch over so that their audiences heard the final words of the Justice's question.

"Those are momentous charges," said Justice Underwood. "Your petition requires an inquiry into the character of an institution which has become virtually the bedrock upon which our civilization is founded. You have no objection to psycho-examination?"

"No—of course not."

"It is necessary in order that trivialities may not consume the time of the Court. As a secondary petition you wish to affirm that as a result of your husband's work you have knowledge that the brains used for cybernetic control are not bits of dead tissue—but are actual, living, human beings, fully capable of thought and emotion, and who are aware of their imprisonment and slavery. In their behalf you petition a choice of death and an injunction against further installations."

"Yes," said Kit, her voice low and tense. "That is my petition."

IT was as if the breath of a world had stopped for an instant. Across the land men paused and stared at the news screens in their homes or on the streets. They listened, unbelieving, hoping for a repetition of those words to confirm their unbelief.

In other lands around the Earth Kit's tiny white face spoke to a hundred million audiences.

The Justice looked silently at Kit for a moment, then spoke gravely. "Your husband's record as a scientific worker is well known. It will be reexamined in accordance with your petition. Please present your papers and tangible evidence to the first desk at your left.

"You will be given your psycho-examination. Upon passing such examination you will be notified and instructed in the

presentation of your pleas and your evidence to the Court specialists. This petition will require the attention of the full Court. I will confer with you when all evidence and testimony has been accumulated."

If the Justice felt any emotional impact of the petition he had just announced he made no betrayal of it. His face remained impassive.

"Thank you," Kit murmured.

As she stepped out of view of the screens a thousand local editors and commentators waited in suspense for comment, instructions or clearance from News Central.

Central was in chaos and no word came. Abruptly most of them realized that this was no mere item of gossip to be taped and patched and hewed to fit the taste of those concerned. The World Court was its own censor and for the news channels to maintain silence regarding such a case as had just now exploded was unthinkable.

After his first moment of stunned inaction Madsen, Central's editor-in-chief, tried to contact Senator Humphries at the Institute. Then he tried to contact anyone at all on the Board. But the Board's instructions were relayed by the information clerk. "Report verbatim. No censor."

And that was as incredible to him as the original affair.

But by that time the commentators had gone on the screens without Madsen's instructions or clearance.

As Kit moved slowly along the corridors toward the psycho-exam rooms she felt of the frog.

"Did I do all right? I was so scared I thought I would faint. He's calling for a full Court. I'm so afraid I'll fail you."

"You are doing swell, darling," said Al. "We've got our case on the books now and the Institute won't dare touch you. It would look pretty bad for them if you should so much as stub your toe now."

"But what about you? I'm afraid for you, Al. Why won't they take revenge on you?"

"It's the chance we have to take. But I don't think they'll touch me. The Court will demand an official examination of me sooner or later and the Board knows it. I'm as safe as you are. After the exam you can go home and stop worrying. A week from now we'll have them completely licked."

She paused by a window, looking out at the bright sunlight, staring straight ahead of her.

"I don't want to go home," she said. "I don't ever want to go back there again. I have no home. There's only a place to cry myself to sleep every night."

"Kit, don't—"

"I want to go with you, Al. When this is all over we can all go on together. None of you will want to go on living. I want to go with you."

"I'm going to go on living just as long as there are two cells of me hanging together that will support consciousness. And I'll be watching over you the rest of your life. You wouldn't do anything like that with me looking on, would you?"

"No, not as long as you are watching over me. But the house is empty. Never to see you again—to be able to hear you but never to see you almost makes it worse than if you were completely gone."

"I can take the frogs away."

"Al, please!"

"Sure, Kit. I know, darling. Don't you think I understand and feel the same?"

When he rejoined them, John and Martha could feel Al's depression.

"Kit's having a rough time," he said. "She's so lonely. In a way you two are better off than we are."

"I wonder," said John slowly. "I wonder if maybe when this is all over she'd like to join us—this way?"

"John! That's horrible," said Martha. "Not deliberately—"

"Why not? There's going to be lots for us to live for, Martha! We won't grow old, but we can watch a changing world through generations. We could be a link between the ages, a unifying force that has never existed before. Life for us is not going to be a dull and meaningless thing, I know!"

"Perhaps," said Al. "I don't know.

Kit likes the here and now, the present fun and the laughter. Right now I don't think it would be fair even to suggest such a thing. She'd feel obligated to accept because of me. Maybe I'll put it up to her—when this is over."

CHAPTER XIII

Defeated

AL left them. He had been gone too long from his vigil at the Institute. In swift succession he made contact with each frog hidden in an office of a Board member. They were all out.

He looked in on the conference room. From a high corner he saw that yellow table he remembered so well. It had not yet been repainted to erase the faint stains of his own blood that could not be removed.

The Board members were watching a news screen. But no gloom of disaster marked their witnessing of the scene that had just flashed from World Court. Instead, an air of high joviality predominated. They seemed in uniform high spirits and glasses tinkled occasionally on the conference table.

Al looked on for a moment in amazement, unable to believe that these men comprehended the thing they had just heard. Then suddenly he cried out, "John —Martha! Come quickly—the conference room!"

Almost instantly, they were present.

"What is it?" said John.

"Listen."

Senator Humphries was speaking. He was sitting before the screen, a glass in hand, his florid features more bright than usual. His governmental colleagues surrounded him with admiring self-satisfaction. Dr. Jurgens was there too, beaming quietly and unobtrusively.

The Senator was saying, "This is a most satisfactory development. We couldn't have asked for better—provided our psychological prognostications are eighty percent accurate."

"Easily that," said Emmons, the psychologist of the Board.

"You've done a remarkable piece of work, Dr. Jurgens," said Humphries. "Your efforts will be felt in history."

"It was not so difficult as we had first supposed," replied Jurgens. He smiled an acknowledgment of the tribute. "Dr. Demming had already managed contact with his wife and with other brains. They conceived the idea of placing the case in World Court to attract public attention. All I had to do was discourage it slightly and they were all for it."

"If we can just maintain contact with them for sufficient time to attain complete success—" said Humphries, drinking up.

"Dr. Demming expects me to testify for him—if the case should get that far along."

Humphries roared with laughter. "I'd like to hear that. I really would! But I still shudder when I think of you bringing Dr. Demming in here and killing him in cold blood right before our eyes. I don't think any of the rest of us would have had the stomach for that. I only hope you can justify it in the end."

"I shall," said Dr. Jurgens. "Never fear."

The three minds who watched and listened through the eyes and ears of the frog were silent under the impact of what they had heard. Al was the first to speak. "There's no use saying, 'I told you so,' but there you have it."

"That's not important," John snapped irritably. "What have we done to play into their hands? That's what we need to know. What conceivable plan of theirs could be advanced by our move?"

"We can't back down," said Martha. "We'll play it on through. Our advantage is knowing their expectations."

Across the city Simon McRae was one of the few of the world's billions who missed the news. He had idled the whole afternoon in well-earned leisure. He leaned back in the patio lounge to adjust the sun shade a trifle more to the west.

"Permit me." The android named Henry rushed to relieve him of the task.

"You're a little slow there today,

Henry. You should have seen the shadow moving beyond me. Scanning still bad?"

"I think so. Or maybe the recognition level has fallen low. I didn't seem to observe the movement until your action called my attention to it."

"But your alarms have notified your central, of course?"

"Yes. I'm sure the matter will be corrected."

Simon leaned back again to pursue his contemplations. A short distance away the three children and some friends of theirs were frolicking in the pool. They were almost grown. In another year, he reflected, Jan would be eligible for her independent subsidy unless she wanted to wait for marriage. He hoped that she would stay at home until she married.

There ought to be a law requiring it, he had often thought. These single youngsters who went off with their independent subsidies so often wasted their lives with complete indirection. He was old fashioned, he supposed, but he believed in the importance of the home as the cornerstone of the social structure.

Few of these children had any real conception of how fortunate they were. If they could have known the barbarous times of five hundred years ago—

SIMON was an exponent of Artificial Dangers. The Society encouraged the study of history to make men understand their own day. In some quarters the group was looked upon as eccentric but membership had grown by nearly a million in the last three months alone. You couldn't ignore a philosophy that could attract such numbers, he thought proudly.

He had never concerned himself much with history or any other study until joining the Society. Now his knowledge of history often brought a feeling of exquisite sadness at the thought of Earth's teeming billions that had flowed through the stream of time in slavery and barbarism, laboring with their hands and bodies to produce, each man for himself.

No mind could endure long years of such insecurity as they had known. From the evidence of history they hadn't endured it.

That was the crux of man's life—*security*. Even barbaric psychiatry had shown that man's bitterness and desperation, his warring and confusion, were products of the insecurity he had always known.

That was the gift of Cybernetics, security. Release from the perpetual fear of want and the struggle for survival. It was a gift of the gods.

Simon looked out over the pleasant things that were his, not by his own labor but by the right of subsidy, the right of existence. A man's body was free and his mind untrammeled by need of acquisition.

Wiener, the great father of cybernetics, would have approved of the Artificial Dangers Society, Simon thought. Even in his first definite book he had suggested that a possible course of human events would be a society founded not upon barbaric buying and selling but upon ideas.

Such was the present age. Artificial Dangers was one of the most profound formulations ever to appear. It recognized that the animal nature of man's body could not be ignored even though his spirit soared. It revived the ancient ways of hardship to feed the animal that was man.

Simon had just returned from a week's excursion with fellow thinkers. After a swift flight to Canadian wilderness they had isolated themselves for three days of enforced tramping in trackless forest. For one day they had denied themselves rations, the other two had been on half measure.

They had, of course, been in constant communication with the emergency crew that remained with the ship. No one but a fool would cut what might be a necessary lifeline. But the experience had invigorated him both in mind and in body.

He turned his head at the sound of a step. His wife approached from the house. He turned to look at her, then turned for a better look.

"What's the matter, Rue?"

"Did you hear the news about an hour ago?"

"No—trivial gossip."

"Not this." She told him of the case against the Institute that had been brought up in World Court.

"You can be sure the psycho test will take care of that girl," said Simon. "She's insane!"

"I got to thinking what would happen if it turned out that her charge should be supported? It might upset the Institute's work and interfere with supplies. Of course I *know* that nothing serious or permanent could come of it but I just thought I'd get a special dispensation for some of the things we don't carry too far ahead."

"Nonsense! Nothing can interfere with supplies. Why, it hasn't broken down in over three hundred years. It's not going to start now."

"I called the center," said the woman. "I couldn't get through."

"Some difficulty with the automatic replacement unit or something like that. I don't understand the technical matters but the cybernetic control will have the out-of-order components replaced."

"It wasn't out of order, Simon. It was jammed—jammed by others calling in 'specials' too."

"You shouldn't have done it then. That just shows you what a few excited fools—" He paused and stroked his chin as he settled back in the lounge. He watched the slender figure of his oldest daughter plunge gracefully from the high board to the water.

"When I stop to think about it," he said slowly, "maybe it wouldn't hurt any to run down to the center myself and pick up a few things. Last week with the Artificial Danger crowd—it leaves a physical weakness that can't be ignored. I think I *will* run down there."

Traffic was fairly heavy, but Simon managed the twenty mile run in half as many minutes. As he drew up before the building of the distribution central he exhaled in dismay.

The building was not large. It didn't need to be. Flow was kept steady to eliminate unnecessary storage. There was never more than a day and a half supply of food in the central and most of it was handled by tube.

NEVER had Simon seen such an assemblage as this around the center. It seemed as if every citizen of the local community were trying to get in at once. It was a preposterous disgraceful affair.

As he watched he saw a man emerge at the rear of the building with an armload of goods. The man passed close by the edge of the crowd that was trying to get in. Then he moved quickly away.

The amorphous mass of people seemed to thrust out a tentacle. Some grasped a package from the man's arms and darted away. The man started to run. Then someone bore him to the ground and he was lost in a milling heap.

Artificial Dangers, he thought. Let the scoffers laugh at the philosophy now. He thought of his family. He wasn't afraid. He'd take care of his own. At a time like this, the philosophy of the Society would prove to the world its worth.

He left the car and became a cell of that mob animal. Blindly and without compunction he slugged and crushed his way. Ignoring recognition, his face showed no emotion as his fist downed men who had been his friends all his life.

In places the hoarding began almost at once. But for the most part the wave of panic didn't penetrate around the world for about twenty-four hours.

It was difficult to grasp that hoarding might be necessary. The vast cornucopia of the Welfare State was a structure whose failure could not be envisioned by the mind of the average citizen.

But the intimation of disaster that lay in Kit's charge before the World Court was like a rain of fire that showered upon the Earth, igniting a vague and imponderable but nevertheless terrible fear in the mind of each man. The vague and forgotten fear of insecurity that slept in the subconscious like a tired demon, against whom all defenses had long since been removed.

In the day following Kit's appearance

distribution centers were drained of current supplies. The following day's replenishments lasted but hours. Transport facilities, operating on precise, pinpoint schedules that fluctuated only with the population loads, could not endure the sudden clashing demands. They began to fail.

The news screens showed the fury as it swept over the Earth. And from a thousand vantage points John and Al and Martha watched. They stared in silent uncomprehending disbelief.

"The citizen of the Welfare State—behold his magnificence!" said Al. "This is what we have to appeal to."

"I don't understand it," said John in admitted bewilderment. "Who could have supposed such a reaction from only the filing of our intention? We've misjudged the force of it badly and yet we should have been able to calculate it. We've got to make a try at cancelling it out."

He called out sharply, "Kit!"

"Yes, John? It *is* John, isn't it? I can almost be sure of the distinction between you three now."

"Yes. Have you watched the news since your charge was entered?"

"Oh, yes, I've watched it all day. It makes me sick and afraid. Those creatures I see are not people any more."

"We gave so much attention to planning our action that we wholly overlooked such extreme possibilities. We must make an attempt at stopping it.

"I want you to place a call with Justice Underwood. Tell him you are in contact with the cybernetic brains and continued cybernetic controls are assured until replacements are built. There is no cause for panic. There will be no interruption of production. Ask him to release that not as your statement but as his own order. Say you are not ready for that information to be entered as testimony."

It seemed hours that it took Kit to reach the Court. Her call was passed from one assistant to another. Finally, a Specialist Clerk was reached. Her request had been relayed to him.

He looked sharply from the screen. "Katherine Demming will no longer be recognized by the Court. The psycho-test revealed severe pathology for which you are being transferred to Hospital supervision. You will place yourself in readiness for receipt of their instructions."

The screen blanked. Kit gave a little hysterical cry and turned to the watching frog.

A moan escaped Martha. "Kit—you poor little Kit!"

CHAPTER XIV

The Plan

JOHN had forgotten the feel of fear. Now its return was like a cold stream bathing him. He had looked upon the faces of those who someday might be like himself, lost and forgotten. They had been the faces of madmen.

It was these to whom he must go, these with whom he must plead for his freedom. And not his alone but theirs as well. For the first time he glimpsed the hideous face of defeat. That conviction of destiny, that had fallen like a mantle upon him in those first days, was shaken and torn. He *could* fail. He *could* die, leaving undone that which he had sworn to fulfill.

He drove these thoughts away but they only went into hiding and he knew they lurked at the edge of consciousness, ever ready to swarm upon him again. To have seen the devil was to have gone half the way to becoming his slave.

The rioting dwindled that night. The inadequate and outnumbered police forces restored a measure of control and a statement from the Court regarding Kit's psychopathology dispelled the stimulus of fear. New directives were issued at once regarding the dissemination of Court filings before psycho-exams.

Kit could no longer present their case. It would be closed and abandoned and Kit confined for treatment of her pathology.

John felt sick within himself at the thought of her. Jurgens had been right in one thing at least. Tiny Kit *was* like

a child, a little human bit of perfection and grace. She held no strength to bear that which she had been called upon to bear. Without thinking they had pressed upon her mercilessly to assist in their burdens as well. They had broken her like a Dresden shepherdess carelessly smashed.

Al remained in nearness to Kit, sharing her desolation, giving such frail comfort as he could.

John and Martha were alone and withdrawn. Martha broke in upon John's thoughts. She longed to comfort his despair but her own faith was washed away in the riotous flood she had seen.

"Could this be what the Institute Board counted on?" she asked. "Perhaps they understood Kit better than we and knew her case would fail before the Court."

"It's possible. C e r t a i n l y it has strengthened their position by increasing the people's sense of dependence upon the cybernetic brains. But it's not the full explanation of their plans. We haven't seen it all yet and I can't imagine the rest. But if they're counting on our abandonment of our case, then they are due for surprises."

"How can we carry it on?"

"We have one long slim chance remaining. Since the day I finished the first frog I've dreamed of a wild, impossible thing. I've worked on it and kept it apart because I dared not let you know the hope that it would bring unless I could be sure you would not have to endure its failure.

"I'm not sure yet but almost, and now I need your help. To continue our case there is only one way in which we can make an appeal that cannot be denied. That is to 'come back'—to let them see us as human beings once again, to tell them with our mouths and the fear in our faces what it is like, that prison in which two millions of their loved ones are entombed."

"What are you talking about?" cried Martha. "That is the one thing that we can never do!"

"Let me show you what I have been doing."

She followed his lead in bewilderment, wondering how he could have kept this thing from her when she could read almost his every thought.

HE took her into a laboratory she had never seen. There she looked upon vats similar to those in which the frogs were built up cell by cell. But these were larger. In them spirals of cells were being woven slowly from a thousand complex orifices. Cell by thousands of cells a solid mass was growing in each vat.

"What *is* it, John?"

"We've learned much since that first frog. We've learned such knowledge of cell structure and formation and control as would have taken a generation of men to learn otherwise. What is to stop us at this point? Why can't we go on? Why can't we duplicate the form and texture and most of the functions of a normal human body?"

"John!"

She stared down at the distorted mass of cellular material beneath the eye of the frog. She recognized now the outlines of what was forming.

"Is it possible?" she whispered.

"I don't know—for sure. We had to have something substantial to present at the trial. I was counting on a fairly creditable looking anthropomorph that we could control as we have the frogs."

"And afterwards?"

"If the bodies can be made perfect enough with functions that will support brain nutrition our brains could be placed in the skulls. It would be hopeless to attempt to restore all nerve connection but it would not be necessary.

"The bodily senses can be connected by a mass of telepathic cells such as we have in the frogs. By telepathic connections between those cells and our own brains we can utilize the bodily senses and control them.

"A plant could be set up to manufacture such bodies for all the cybernetic brains."

"I can't believe it's possible," said Martha. "I've lost all capacity to hope for such a miracle."

John's high pitched enthusiasm subsided. "It's only a faint hope, darling, but it's one worth working for.

"Of course it is. I'll help."

"We've *got* to have them to carry on our case or give it up. There's no other way to keep it before the Court and the people. With Kit sick and Al's assistants dead we have no possible human contact. We've got to provide our own."

Martha looked again upon the fearful mass growing within the vat and a stinging, like hot tears of unexpected hope, semed to be somewhere within her.

"What can I do to help?"

"Nothing here—right at the moment. I want you to get in contact with the brains in the vicinity as we planned. Al was right. We should be prepared to strike back with force. Talk with them. Find out how they feel and what help we can expect from them. When I need you here I'll call you."

He could scarcely rid himself of the feeling that someone was watching him, almost reading his mind—laughing at every move he made as if it were futile in its very conception. It was as if he were pulling aside one curtain after another and behind each one the image of opposition swelled in greater and greater proportions.

It seemed logical that the Board had anticipated Kit's insanity but John could not comprehend Jurgens' infinite treachery. It held only a kind of sadness for him now, like that inspired by the maddened panic-stricken mobs he had seen on the screens. It was as if everything he viewed became corrupt beneath his sight—a Midas touch of fear and betrayal.

He looked to the structures forming within the vats. They were blasphemous obscene things. He tried to remember what he had been thinking when he first dreamed that wicked fantasy of creating a human body.

He had been thinking of Martha. He had been thinking of her lips and her eyes, of her slender wrists and the long clean lines of her legs. He had been thinking of the sweet scent of her flesh and the touch of her hand.

He kept staring at the vats, trying to dream beyond the foul things that they held.

He had discarded three of the forms and started anew and it must have been no more than three hours since Martha left when he suddenly heard her voice again.

IT seemed faint with panic as if she had found herself suddenly alone when she had supposed a company about her.

"John, come here—Al, too. I want you. Come and see what I have found."

The two men responded at once as she led them to a frog halfway across the city.

"What's the matter?" said John anxiously.

"I can't reach any of them. I've tried ten different brains."

"Why? Why don't they respond?"

"You'll see for yourself. This will change our whole position. You won't need a plant to make bodies for all these—"

John reached out, touched the other mind and recoiled instantly at its alienness.

"Go on," said Al.

He probed deeper, Al beside him. Nearly all the brain's neurons were occupied with the monotonous relaying of impressed data or else locked up in feedback circuits that guarded the thousands of operations under its control.

But far down, in a shallow area of neurons that had once formed the subconscious area of the individual, they found independent thought, the remnant of a human mind.

There was no recognition from the creature they found there. It was a sea-green world of water and peaceful swimming things, vague shapes without horror.

It was a place of incredible peace, an imaginary paradise, where no torment could ever penetrate. Insidious, inviting—it beckoned to them.

John tore his mind away—and felt as if he had been running for many hours. "What has happened down there?"

"The perfect escape," said Al. "The only escape—schizophrenia."

"The newest installation I tried to reach was only a few days older than our own," said Martha. "It was the same sort of thing. Once I almost thought I wasn't going to be able to pull away from it."

Al said, "We would have been in the same condition if it hadn't been for the increased forcing field I used. Schizophrenia is the automatic protective reaction of a human mind in such conditions as this. We might have supposed that it would be this way."

"That means—there are no others besides us?" said Martha.

"Probably not one in the whole world who is still sane."

"But we've got to obtain some control over the cybernetic facilities!" said John. "I disagreed with you before, Al, but I'm convinced it may be our only hope now."

"Perhaps Jurgens knows of this," said Martha. "That might explain the Board's actions."

"Not wholly," said John. "They intend to use our case as the springboard for some definite action of their own. Without the means to influence a strike of cybernetic brains we may have no weapon to use against them in case our Court appeal fails."

"If Jurgens knows of this," said Al, "and also the identity of you two as well as me—as he must do—he can stop us any time he chooses. He's deliberately letting us go on. At some point he's going to tell us that our usefulness is over. By then we will have to have obtained independence or admit our failure."

"If we can't obtain voluntary control of the cybernetic brains," said John, "can we *take* control of them?"

"How?" said Martha. "We might be able to force control on a few dozen through the frogs but hardly enough to count."

"Al, couldn't you produce a broadcast wave that would block the impressed instructions? The machines under control would come to automatic stasis in the absence of such instructions."

"It might be possible," Al considered slowly. "I'm quite sure that it would but it would take some pretty terrific construction. I'm doubtful if I could hide it here in my place. It would have to be about the size of a Class-three energy transmitter."

"We'll have it then. When Jurgens comes to tell us we're through we can throw this at him, provided we have not won our case through public acclaim by then."

"It's funny," said Al slowly.

"What?"

"I can build such a device. I haven't the slightest doubt of my ability to do it. It will take a few days. Already I can see the outline of the principle upon which it will operate.

"But my brain is the same one I always had. There are no more brain cells in it than in the average human brain.

"The only difference is the absence of destructive feedback. What the human race might have accomplished if cybernetics had been utilized to reduce such feedback in the mind of every man! Instead we chose to build the Welfare State. Instead of reaching for maturity we chose a return to the womb."

CHAPTER XV

Darkness

THE darkness was like the gloom of any night. The wind that stirred the curtains above her bed was cold, but Kit lay amid its chill, unaware.

She had lain there for long, trying to still the passage of time, that record of motion. She had quieted the motion of her body. Outstretched, her arms and legs had been without movement until sensation had receded. They were like remote peninsulas of the vast continent of her body, and she was retreating farther and farther into the stillness and dark distance. But the persistent throbbing of blood and the gentle wind within his lungs could not be stilled.

It should be, she thought. Time had really stopped when Al died and she had tried to make it go on by thinking him alive. She couldn't end the illusion, she couldn't retreat far enough into the depths of her until that throbbing ceased.

Slowly she turned her head to see the gargoyle on the table beside the bed. The movement seemed to span an age of time. As if at her bidding the clouds parted for a shaft of moonlight to fall upon its face.

She couldn't remember when it had not been there. It was part of this dream that had lasted for an eternity, part of the dream about Al. He had gone so long ago and she had kept him waiting because she had been afraid to go with him. She wasn't afraid any more, she thought. She didn't need this ugly dream-thing to clutch for support.

Kit reached out a hand and clasped it gently. She brought it close to her face and stared into the single monstrous eye. She couldn't remember how she'd gotten the thing, where it came from. But her need of it was gone.

"Kit, darling," said Al softly. "What are you doing? You should be asleep."

She smiled softly. Her head was bent and the dark hair was falling across her cheek. "I don't need that dream any more," she said. "I guess I needed you for awhile when I was afraid but I don't need you at all now. I wonder where you came from? Out of my dreams, too? You're not even real. That's why I can't remember. But I can get rid of you now just as easily as you came."

"Kit! *Kit!* This is *Al!* What's wrong, darling? What are you saying?"

"Al was big," said Kit tenderly, "and he had gold hair and eyes so blue that no one but me could look into them for long—and maybe Martha. I think she was jealous when I took her Big Swede."

"Kit—turn on the light! Don't sit there in the darkness that way. Turn on the light and—"

"I wonder why I dreamed up something so tiny and so ugly as you? Maybe I always longed to be able to hold Al in my hands like this, and maybe I was even jealous of his beauty. But that was the ugly part of me and I can get rid of it just like the rest of the dream."

In the dark she held it and ran the fingers of the other hand over its contours. She felt the pitted hide, the smooth muscle band that covered the belly. She touched that face and felt the monster teeth.

It was like a gesture of grotesque farewell, for she kneeled then in bed and hurled the frog with all her strength through the open window.

"John! Come here. It's Kit!" Al's urgent cry sought out his companions.

John touched with the frog that tumbled down the grassy slope outside the house.

"The frog in the study!" said Al.

John left it to Al's control, watching as the frog hopped through the darkened house. There was no sign then of Kit in the bedroom. They returned to the hall. Kit's figure was silhouetted in the open bathroom door. Her hand held a glass to her lips.

"*Get* it!"

The frog smashed into the glass and hurled it against the wall. The dripping fragments showered down and the frog fell to the floor bathed in the liquid from the glass.

LIKE a dimming light the frog's vision shrank to the threshhold of darkness but Kit's ringing scream seemed amplified by the darkening vision.

"I threw you away!" she screamed the words over and over. "You are a dream that can't come back! I don't need you any more."

They saw as through a dim curtain the shadowy outline of her leg. She kicked at the frog until the toe of her slipper was covered with its fragments.

"The poison destroyed the frog's sight," said Al. "Get Martha. Bring in more of the frogs. We've got to keep her occupied until we can figure out a way to get help."

In the darkness Kit moved back to the bedroom, her feet soundless on the carpeting. She stood in dread expectancy

there in the center of the room, waiting —just waiting and listening.

And then she heard them. Not just one this time but scores of things that were not there at all—things she knew her sick mind had woven out of madness.

She could hear them on the cement outside. It was like a faint slap of a hand on a cheek. Then on the carpeting of the inside it came, a quieter, gentler plopping sound.

"Kit." Al's voice was low, barely audible above the threshhold of sensibility.

She answered just as quietly, "Go away. I'm not dreaming any more and you're not real. Al's dead and I'm going to Al. Go away. *I didn't dream you all!*" Her voice rose in panic and she screamed the final words into the darkness.

The plopping things seemed to swarm all about her. Backing, she fell against a chair and crumpled on the carpet.

"Martha—what can we do with her?" Al sounded as if his own powers had been strained as much as Kit's.

"Let's withdraw the frogs. She may be unconscious or at least she's distracted from her suicidal intent for the moment. I'll keep watch with one frog here in the corner. But you'll have to find some way to attract help."

"We can open the phone circuit with the frogs. That will attract attention eventually. But listen—I think someone's coming outside.

Dark scud had completely covered the moon but the infra-red vision of a frog atop the corner of the house showed John the exterior clearly. A half dozen cars without lights had driven silently into the approach to the house. Twenty or thirty figures were emerging in equal silence. He heard the sound of hushed voices and caught the outline of weird shapes.

There were men wearing brief scarlet capes on which a white sword was emblazoned.

"Al!" John's own message was a near scream.

"What is it? Who are *they?*"

"It's that lunatic outfit, the Society for Artificial Dangers. They're after Kit."

Al's thought processes seemed a sudden snarl of incoherency. He made no move, no gesture. "John!" His voice sounded lone and far away.

"What is it, Al?"

"Nothing. Things seemed kind of foggy for a minute. We're not going to get out of this, are we? Right from the first we never had a chance, did we?"

"Aim for their throats," said John. "We've got at least a hundred frogs nearby. Their throats or their eyes. Is there a gun inside that Kit could use if she were able?"

"There's a gun but do we dare?" he hesitated. "Maybe it would be better even *that* way."

In every culture its own insanity, John thought wearily. The human mind, the greatest product of two billion years of terrestrial evolution. How close nature had come to a masterpiece and how terrible the slim margin of error by which she had failed.

Insufficient long connectors for the mass of neurons assembled in that brain. Inadequate control against damaging positive feedback. A machine that functioned like the handiwork of God as it neared the invisible point of overload—and became a vast horror once that peak was passed.

He leaped from the roof into the darkness as the creeping men passed under the eaves. There was a moment's screaming struggle, then a figure fell writhing. It gurgled and screamed as dark liquid flowed on the ground.

A MISSILE hurtled suddenly from the line of figures into the house and disappeared within. Almost instantly, the glare of flame lit up the landscape.

Inside Martha cried out. *"Kit! Get up!* Behind you—the gun from the drawer. Kill them, Kit!"

The torch had fallen in Al's study. She could see the glare. Kit could smell the stench of its burning. It made no sense. Its warning was not a thing to which her mind could any longer respond. She reached for the gun.

"Run, Kit! Hide behind the patio wall. Shoot the men out there. They burned the house."

As if in sleep she obeyed the command. There was no longer terror. The commotion had shaken that. In its stead there came bewilderment, a yearning uncomprehending sense of pilgrimage, a search for destiny.

She had lost her slippers and her small bare feet were like a child's moving slowly across the room beyond the range of the advancing fire. She held the gun in her hand but only because she had been told to.

She advanced along the hallway and emerged from the house, standing behind the low wall that formed a narrow patio in front. Beyond her the half light showed a nightmare of cursing, snarling figures. Half, at least, were writhing on the ground. The rest, upright, fought the surging waves of creatures that flung at them out of the darkness, silently ripping at faces and throats.

The scene was meaningless. Only the sick longing within her had any reality. The pit of darkness out beyond the flickering light seemed the goal towards which she must go. She stood up on the wall, the cold wind whipping her hair and the thin nightdress that was scarcely a covering.

Martha screamed, "Get down, Kit! *Get down!*"

The mobbers saw her at the same time. Coarse cries came out of the half light. "There she is. Get her!"

Kit gave no sign of hearing. With one hand outstretched she sobbed into the night, "Al—take me to you, Al."

Al and John saw her then. Sickness overwhelmed them. She was naked against the flames that thundered behind her. Like an angel hovering over the pits of Inferno, Al thought dully while his mind raged for coherent action.

Then, out beyond the circle of light, one of the Society raised a gun. One Simon McRae, who had a daughter. It might almost have been her whose body was bared against the flames, he thought as he sighted upon her small silhouette.

He shook off the deceiving thought. This was a thing of evil—a witch in angel's guise, whose demented plaint had shocked the world with fear. Against such evil the Society would fling its might.

He leveled the weapon.

John flicked out for the nearest frog, then retreated. There were none closer than the one he'd left. In sick dismay he sent it leaping. It was too far for one jump. He bounded and shot into the air again but the mobber fired even as he left the ground.

For a moment Al did not believe Kit was hurt. He had seen the lightning streak that betrayed the bolt of energy in the night but it could have passed behind her.

Even while gladness was rising within him she crumpled. She fell backwards from the wall as if the life she had despised had fled in sudden glad escape.

She was dead, Al knew then. One touch of that flaming energy burned every neuron in the human body. He reached out, touched the frog that John empowered.

"Let me!" He seized control with savage demand.

"He's dead," said John.

As if Al had not heard the frog tore and ripped while blood streamed upon the ground. It clawed the face of Simon McRae beyond human recognition.

Only one car was started in the attempted escape of the mobbers. The frog that was stationed within it prevented any remnant from fleeing. A mile away the car crashed from the highway and burned.

It could have been no more than ten minutes since the first cars had driven up, John thought. In so short a time the whole world had changed.

People were approaching now, attracted by the flaming house. He moved the frogs into the woods beyond. Only one remained beside the fallen body of Kit.

Martha was there and Al murmured over and over, "They couldn't let you live, could they, Kit? You never hurt them but they couldn't let you live. We'll get them for you, Kit darling. Ten thousand of them for every hair of your head."

"Al, we've got to get the frog away."

CHAPTER XVI

The Oscar

THE yearning for physical movement grew out of proportion to all other torments. The nerve endings that had once reported the flow of muscular power through legs and arms and back were not wholly dead, John thought.

Now above all he wanted to run. He wanted to feel the surge of tightening thigh muscles, the hot fast breath of agonized exertion. He wanted to feel the fatigue of exhaustion and let it flow over him, burying him. He wanted to sleep.

How much could their minds stand, even with the help of the forcing fields, before sliding into the schizophrenic retreat where Eden beckoned?

"John—John, don't, please!"

"What? Don't what, Martha?"

"You—going off like that. It frightens me. It's like those brains we invaded. It's like Al. I'm scared, John. I'm afraid he's not coming back."

"Have you tried to force contact?"

"Yes. It's like a barrier of steel he's built around his mind. I can't get through it at all."

"Don't worry for the present. I think he's just shut himself away from us because human contact is too much to endure after watching Kit die. He blamed himself for her schizoid attack. He thinks he should have anticipated it and never made contact with her after she thought him dead. She could have endured that.

"But he'll come back, darling. If he'd slipped away like those other brains he couldn't hold you out."

"He doesn't believe there's any use of going on. I heard what he said back there—'Right from the first we never had a chance.' He's right, John. Look what they did to poor little Kit. How can we fight them?"

He felt the fingers of her despair clutching as if at his throat. They crept into his brain and usurped pools of unnumbered neurons, and there they planted new seeds of desolation where already his own grew in chaotic profusion.

Kit's death had stricken the last pillars of his faith in the people. She had been only the carrier of his message of salvation and they had killed her for it. It could be argued that only a single maniac had fired the shot that killed her, he thought, but that was only a lying half-truth.

The entire civilization that permitted the Society to flourish as a symptom of its own illness could be indicted for her murder. Overload, he thought with grim recognition—overload and breakdown. Circular impulses occupying great neuron pools and rendering them valueless.

"*Martha!*" His voice was brutal. It shook her and jolted the circular structures building like crystals in a drying pool.

"We've got the anthropomorphs to finish," he said with the same hardness. "I need your help now."

She felt the impact of sudden rage and then—clarity.

"I'm sorry, John. Show me what's needed."

There was healing in work. Slowly it broke up the pathological bands of circulating memory and freed the neuron pools for constructive usage. But never, without the forcing field that bathed them, would they have been able to do it. They would have gone the whole way into escape that meant final break with reality.

The shapeless forms upon which they worked were heartbreaking. A thing that faintly approached a human form suddenly burst with wild cancerous growth of rebel cell life. Another, that seemed to have reached near perfection, was afflicted with a decaying mould that shed leprous masses.

But one attained the shape of a man —and held it.

It was a sorry looking thing at best but the cells did not go wild nor did they die. John made contact with the small mass of synthetic neurons in the brain case. He raised the figure to an upright position and looked through its eyes.

"The vision's good," he said.

"You look like a zombie."

"Call me Oscar."

"You'd better activate the heart and lungs or you'll kill more cells than can be replaced."

As deliberately as throwing a switch he sent a neural pulse that contracted the heart muscles in rhythmic beat. He did the same for the diaphragm. He adjusted the rate of pulse and respiration and turned the control over to the memory cells.

SLOWLY, as if rising from a long sleep, he thrust a leg over the edge of the vat and stood up on the floor. Through the eye of a frog he looked at the form. It was a thing of horror.

"We couldn't send that out," said Martha.

"I don't know. Maybe something like this would win more sympathy for our cause than a perfectly human looking reproduction. We can argue that this physical horror is the counterpart of what the brains endure."

They had tried to make it as complete as possible but the hair was thick wire-like stuff. The epidermis resembled masses of crimson scar tissue more than normal flesh. The limbs and torso were lumpy ill-shaped things.

"It will do for a starter," said John. He walked the Oscar about the room. "The muscular controls are excellent. I'd be willing to enter him in a foot-race any day. Finger flexure is very good, too."

"Let's try again. We know how to control cell growth now. We should be able to build the contours better. We simply haven't got the right cell for skin at all."

He laid the figure on a bench. Then, as they turned back to the planning of an improved Oscar, they heard a faint voice.

"John—Martha!" It was Al for the first time in days.

Martha uttered his name with a sobbing cry. "Al, are you all right? Why did you shut yourself away from us?"

"I'm sorry," he murmured. "I guess I went like Kit for a little while. I'm working on the transmitter again and I've been watching the Institute Board."

"I was so afraid you would never come back! We've done nothing but work on these. We want one to send before the Court."

"You should have kept watch on the Board. But that is my fault. They are planning a move of some kind for tonight. We could find out if we had time and means to search their papers. But I know only that it consists of a public announcement Senator Humphries is going to make tonight. He's using a live audience and it's being given world coverage."

"And it has to do with the cybernetics question?"

"I'm sure of it from what I've overheard."

"A live audience," said Martha. "That means an attempt to whip up public hysteria for something. But what could it be in connection with cybernetic brains?"

"It seems part of a long-planned action and somehow they have used our contribution to trigger it."

John glanced at the shape lying on the bench. "We could never get the frogs into a crowd like that and we've got to be present. We'll send that one."

With stolen, ill fitting clothes, the Oscar shambled through the streets of Warrenton. Through its eyes John watched the city and the people. It was so much different from looking with the eyes of the frogs. Passersby sometimes gave a startled second glance as they caught the glint of scar tissue in his face, yet he could walk among them.

There were no olfactory organs. He could not smell the ever-present scent of flowers in the air but the rise and fall of the creature's lungs was a pleasant thing.

It seemed like a city from which he had been absent on a trip. There was just the faint unfamiliarity of long absence. The streets, the lights, the buildings—he had remembered them but his perspective had erred by just a trifle.

He saw a familiar figure coming towards him, a biochemist he knew. Then just in time he remembered—and withheld the greeting that almost burst from

his lips. He shrank back, retreating against a dark wall to let the man go by. He saw all the chatting people, the gay and laughing people walking and riding by, and suddenly he was an utter stranger.

There was none with whom he could speak. Half the city would know the name of John Wilkins—but none would know *his* name. None would know that shapeless face that looked as if it had been seared in flame.

The bitter winds of loneliness swept through the empty corridors of friendship. But, watching the faces as they passed before him, he felt as lonely for them as for himself.

Were they any less prisoners than he? There was only a single difference between the cybernetic brains and every man. The severed brains *knew* and understood their lone and forsaken fate.

A man deluded himself. By the crudities of touch and speech and sight he made himself believe he was close to other men. Yet between them stood the barren impersonal intermediaries of sound and light and electric waves that traversed long neural pathways.

From secret thought to neural impulse, to psysical act, to neural stimulation, to electron displacement in another's brain—men believed they were close when all that crude and feeble way was the shortest path between them!

Yet deep within each human brain lay huddled in terror the thing that was a man. It understood the human prison house that held it trapped and it despaired of the devious, uncertain way that led to other human touch. It knew how poor a thing was human speech to tell of love and hate and sorrow. It knew how men's myopic vision peered through a narrow spectral slit while unseen worlds spread out on either side.

John turned again into the stream of moving people. He raised his head higher and looked out upon them. He did not mind their gasps of startled horror. He had no cause for sorrow. It was they who should bow their heads, for they were lonely men and did not know there was no other way for men to be.

CHAPTER XVII

Wolf Pack

JOHN brought the Oscar up on the outskirts of the crowd. He continued to watch their faces, fascinated by the sorrow he felt for them. He had hated them and now it all seemed burned out of him. They seemed like the faces of little children, some with the innocence, some with the unrepressed viciousness of little children. And each marked with the stamp of the Welfare State.

Wiener had once hoped that a society might develop on a basis of ideas when cybernetics should come into full flower.

These children had ideas, John thought. They had conceived the Society of Artificial Dangers. They had killed Kit. That was the kind of ideas these immature ones thought.

Their magic key word was security—and they had none. Within each was the secret belief that some day the Welfare State *must* break down—as if some subconscious guilt harassed them for their wasted lives. With each passing decade the secret fear grew sturdier.

Would the brains ever be freed, he thought desperately. Something was afoot tonight that could increase the burden ten thousandfold. It was what Al had felt from the beginning, what had driven him to despair when they had fought for Kit's life. John understood it now. Did any of them have any more chance than Kit had had?

Humphries was speaking almost before John was aware of it. He sat down in the shadow of a tree. Humphries stood alone in the lights. Power, John thought—that's why Humphries was not among the workless ones.

He waited before the crowd as if inhaling ponderous import from the very air about him. "I speak upon a grave issue tonight," he said. "In the halls of your government there have been many weeks of solemn conference over a problem that concerns us all.

"I need not remind you upon what foundation this glorious civilization of ours is built. I need not take you back through the pages of history and show you the millennia of man's sweat and toil by which he slaved for his daily bread. I need not relate the details of that mighty struggle between man and the machine nor recall to your minds the centuries in which man suffered ignoble defeat in that struggle.

"Suffice to say that man did, in the end, emerge victorious and become master of the machine which he had served in bondage.

"But there is yet another mistress whom we must serve if our greater mastery is to be maintained, the mistress, cybernetics. She does not demand our toil and our slavery. She does not demand some vast portion of our substance. She is patient and asks only a token offering. And yet we have failed to yield her small demand."

Humphries paused. His eyes shifted rapidly as he gauged the nurture being given the seed of uncertainty and fear that he had dropped.

"It was as much as a year ago," he said finally, "that we received a distressing report from the Institute of Cybernetics. The report stated simply that the number of contracts on hand was insufficient to meet the needs of cybernetic installations during the coming year.

"I need not dwell upon the implications of that. You will all understand it. It means that the very foundations of our society are threatened by neglect and carelessness.

"Yet I do not mean to indict the vast body of you loyal and unselfish citizens. I know that tomorrow there will be thousands of you offering your contracts to the Institute for the cybernetic use of your brains for the welfare of society.

"However, this alone is not enough. You are aware that the need is frequent for controls who, in life, obtained special qualifications. And it is these very individuals who pass on without offering society the just services for which we should have claim on every man upon his death.

"Therefore, in order to give the Institute the powers to exercise such just claim, I am proposing to your Congress a public law which will have to be ratified by you in referendum—a law which will allot the Institute the right to make cybernetic use of any citizen's brain upon his death without the need of his contract or any other form of consent.

"This is a simple thing I ask of you, my fellow citizens. But upon it rests the future of our glorious civilization. Upon your answer rests our ability to go forward or backward. Our people are growing, our needs are increasing daily—but unless our cybernetic progress keeps in step it means just a little less for each of you tomorrow—a little less the day after that. And who knows where it may stop?

"This is a dismal picture, my friends. It is not the picture that I see. Let me tell you the vast scope of the future that appears before my mind's eye—"

JOHN understood now. And, by their silence and their grief, he knew that Al and Martha understood, too.

They had provided the springboard from which the Institute could launch the demand that they had secretly pressed upon the government for so long. For more than a decade they had sought a law giving them full power to recruit cybernetic brains regardless of the person's willingness during his lifetime. But the Congress had resisted this final invasion of constitutional freedom.

Now the Institute had what it wanted. John and Martha and Al had given it to them.

John reached out and touched gently the minds of his neighbors. In each the same bitter panic stirred and yielded groveling acquiescence to Humphries. Prophet Humphries—come to warn the people of the wrath of their goddess.

But the beginnings of fear had come with Kit's face, shown on the news screens, charging the Institute with crime, demanding the end of cybernetic brain controls because the brains lived.

It had been just the right amount of fear, the conditioning that made their minds ripe for Humphries' plea. Never could another such fortuitous circumstance have been found. It had been perfect.

But the people were thinking too of Kit's charge that the brains still lived. As if he read their minds, Humphries spoke of it.

"We have witnessed in recent days a sad experience. I refer to the delusional charges brought before the Court by the wife of one of our late respected scientists. I refer to her fantastic assertions that the cybernetic brains still live. I have consulted with the psychologists of the Institute, who inform me that it was a very plausible thing for her to suffer such distortions of reason following the shock of her husband's sudden death.

"As to her charges, they are, of course, fantasy. The cyberneticists do not take the brains of live men. The Institute is not manned by inhuman monsters! Never has any indication been given that any trace or semblance of life remains within these dead organs which we have placed in our use. Never has one come back to—"

"I have come back!"

John walked slowly forward into the lights. Bareheaded, his awful features were revealed in the white glare. Around him he felt the sudden bursting terror as if each mind were a ripe pod in the summer sun.

Humphries stopped. In midair his hand left uncompleted a furious, dramatic gesture and dropped slowly to his side. He stuttered a moment, then whirled to the figure on the platform behind him. "Call the police. Have that man arrested and removed at once!"

But there was no one to do the arresting immediately. The Welfare State was an orderly culture. No disturbances had been anticipated. None had occurred in the memory of most of those present.

They could have picked him up and borne him bodily away but they shrank from that scarred and dreadful flesh. John advanced unhindered and climbed the platform steps. Humphries backed away from that unhurried advance.

"This is unheard of," he bellowed.

John ignored him. He stood before the orthocon eye and a gasp of horror and revulsion went around the world as his image came on a hundred million screens.

"I have come back," he repeated.

He faced the crowd and turned slowly from side to side to look at them all.

"They tell you the brains are dead," he said. "Do you believe that they know? I have come back and I tell you they live. I am a cybernetic brain. John Wilkins—John Wilkins, biochemist.

"This thing you see is not a man. I made it to bring you the voice and thoughts of a man—a man who dares you to enter the prison of dark and silent loneliness with him.

"They tell you the brains are not alive. I tell you they are! Two millions of them who live and would curse you until the end of time if they could speak.

"How many of you have a brother there? Or a son or perhaps a mother or father? There is scarcely anyone who has not at least a close friend in this noble service of humanity. Would you like to know the prison in which they serve? Then think of all eternity. Think of it without light, without sound, without the existence of another human being. Think of it in a tomb where death cannot enter.

"Who will be next? Come with me! I invite you to share my prison! The Welfare State calls upon you to serve the goddess, cybernetics, in the name of humanity! Pass a law that each of you may have a chance at eternity in hell.

"I hear no joyous acceptance. Are you cowards?"

THEIR murmur was like a distant wind of fury, heard dimly because it was far away. He watched them somberly, sick with hopelessness. There was not time to reason and explain, not time to tell them they could keep their golden image if they would only abandon the slavery.

"I am not brave, either," he said. "Not brave enough to endure hell forever. I ask for freedom. I ask *you* for it. It is in your hands. Do not give these slave masters the power over you that they ask. Rather, demand an end to it.

"Electronic brains once served cybernetics. They can do it again. Those of us who are in darkness will serve willingly until glass and metal can replace our flesh and blood if only you promise freedom.

"Tonight someone who hears my voice will die. Tomorrow there will be a bright new prison and a human soul that screams in darkness. It can be yours!"

The murmur became a gathering thunder.

He reached out swiftly and touched a hundred minds. In each there swirled a fear that grew and fed upon itself like hurricane winds. But it was not a fear of the things of which he had spoken. He probed past the fear. An impassable block that words could not shatter lay athwart the neural pathways, barring forever an understanding of what he had tried to tell them.

They were afraid, hysterically afraid, robbed of all reason. But they were not afraid of the prison he had described to them. They did not believe it.

Conditioned by ten generations or more of the Welfare State there was only one thing they were capable of fearing—its destruction. The thought of eternity, even though in hell, could not stand in their minds beside a threat to the bounties of the immediate present.

He opened his mouth to speak again but he left the words unsaid. From behind came the sharp hiss of a gun discharge. He felt the bolt of energy splash against the back of the Oscar.

Slowly he turned. The attackers were staring in astonishment, for they knew the charge had struck. He glanced all about. He examined each nearby face of the surrounding mob. They meant no chance for him to leave alive.

He knew that he would soon be dead. Not just this Oscar that they were about to destroy but that small core of being that was John Wilkins. In hours or days they would kill him but they would have to go on living—some in the hell from which he had tried to save them.

He thought curiously of the ant plants of the tropics of Asia. Each species of ant has a permanent abode in its own kind of plant and away from that special plant the ant colonies are lost, disorganized and in chaos.

That was the kind of symbiosis that man had set up between himself and the complex structures of cybernetics. An unhealthy, an unneeded symbiosis, but one that could be destroyed only by generations of chaos.

Deliberately he turned his back on the guns and faced the mob. He felt another charge strike harmlessly. He had scarcely noticed the rising fury of sound but now it was a full hurricane that ripped and tore at him.

He looked down, watching the individual faces of madmen. Crimson with fear and rage, each warped in its own pattern of hate, but the words that poured from the twisted lips were all the same.

"Kill him! *Kill*—"

From behind, a sudden blow crushed the skull of the Oscar. Curiously he remained standing. The small knot of controlling cells had not been damaged though one eye was blinded.

He turned back without haste to face the frightened attacker. He was a huge man but he looked in terror at the figure that walked with its skull smashed.

His rage stifled the fear and he rushed forward again. His face seemed no more human than the one upon which he looked. "I'll kill you, you dirty—"

The blow knocked the Oscar over the edge of the platform into the surging mob. They greeted it with shrieks and snarls of glee like a wolf pack setting upon a defeated former comrade.

As long as the cells would function, John looked up into those faces while hands tore at him and clubs beat and crushed, and the hurricane of sound filled all space.

Lonely little men, he thought. The poor frightened lonely little men—

CHAPTER XVIII

According to Plan

DR. SEYMOUR JURGENS lived alone. He had been married once and had reared a large family but they were all gone. His wife had been dead for twenty-five years, and none of his children had chosen to be workers. It seemed almost fantastic to him now that his loins had ever produced. He was an old man, he thought, a very old man indeed.

He turned out the light of his bedroom and sank back against the soft cradle of his bed. He had witnessed on his news screen the rioting in the park.

He had witnessed, he thought, the close of an Age.

He must have slept, he decided later, but it didn't seem like it when he first became aware of the presence within the room. He didn't know whether his name had been called or not. He only knew that it was there. He turned on the light.

He recoiled at the sight of the frog facing him from the center of the floor. Then understanding came.

"I should have known," he said, "when they reported the Artificial Dangers mob had been killed by the pests from out of space. Who are you?"

"Al."

"Do you intend to kill me or will you listen to what I have to say?"

"I only want to know how much more time we have. When is it planned for our brains to be destroyed?"

"The time is indefinite but your usefulness is done. As soon as replacement brains are obtained you will be removed —and killed. You triggered the fear that made possible the achievement of a law that will give the Institute the power it wants.

"That is exactly what they wanted from you. I showed them exactly how they could get it. You never had a chance."

"I ought to kill you," said Al slowly. "Maybe you saw on your screen the pictures of Kit's killers—maybe you saw the frogs kill."

"I'm waiting," said Dr. Jurgens calmly, "if that is your wish."

"No. I'm not going to do it. You have won and we have lost. And there is one thing yet that I can make you do for us. There is no more to be said than that."

"Don't you wonder just a little if I am as evil as you think? Don't you wonder if there might be a story that I could tell?"

"I wonder about a great many things," said Al. "I wonder if it was inevitable that the human mind should have been such an evolutionary failure after all. I wonder just where it stands now in the stream of its development.

"Did it turn irretrievably downward in its course when it conceived the tragic double dream of cybernetics and the Welfare State? Or is it possible that there might yet be an upswing that would make this failure appear as only a minor depression?

"I doubt the last. Long ago Wiener proposed that the human brain might even then be approaching a level of declining efficiency, that the limitations of its high degree of specialization would lead the species to extinction."

"I am not so pessimistic as to hold that view," said Jurgens. "It was one of those tragedies that the race may rightfully expect to bear no more than once—the coincidence of cybernetics appearing in the same generation as the invention of the Welfare State.

"If either had come two hundred years before or after there would have been a difference. But they grew up side by side, developing and flowering simultaneously. Their courtship and marriage were inevitable. Their monstrous offspring we did not recognize until too late."

SAID Al fervently, "I wish I knew you. You don't sound like the man who signaled my executioner."

"But I did. I did because I believe what I have just said. I knew what an

impact such brains as yours and your sister's and John Wilkins' would have on this sick thing that we call the Welfare State.

"I knew of the increased field that you had developed and I understood even better than you the freedom that it would give you. I knew that all the others had gone into schizophrenic worlds that were of their own creation. But I knew also what you three would do if you were free to act."

"What have we done! The Institute has gained its last bit of ground for complete domination. You have planned it. What right have you to criticize the Welfare State?"

"What have you done? You have built a machine, have you not, that will kill one of those unholy marriage partners of which I spoke. Alone the other will die. That is what you have done!"

"The transmitter! You know of it?"

"Yes. I know of it," Jurgens said quietly. "But don't be afraid. I am the only one of the Board who does. What I don't understand is this—do you suppose that you can interrupt the cybernetic control temporarily while you renew your demands and try to enforce them?"

"That is our hope—unless we are betrayed. But I doubt that one of us has any faith left in our success. I feel now as if the whole world would see its destiny only in our destruction. Nevertheless we intend to try."

DR. JURGENS' white hair trembled with violence as he shook his head. "*No*—once you interrupt that control the schizophrenic brains will pour out the wild impulses from their own crazed worlds into the cybernetic channels. Every machine under their command will be wrecked beyond recovery! You didn't know that, did you?"

The frog was incapable of betraying emotion but Dr. Jurgens seemed to feel the sudden boiling flood that swirled in Al's mind.

"*This* is the way I planned it," said Dr. Jurgens. "Exactly this way. *This* is the event that I predicted would follow from the shots that destroyed your body. You cannot offer them an ultimatum based on a temporary strike. The moment you send that wave of energy around the Earth the Welfare State is in existence no more."

He had spoken furiously, half rising from the pillow. Now he lay back with his eyes half closed. "Perhaps you will withhold it now. I need not have told you this but I could not let you act in ignorance of the responsibility that is yours. If you destroy the controls it is your own free will."

"I ought to kill you," said Al. "You knew and you could have told us. Yet I wonder if I didn't know—far down in the levels of my subconscious. Surely somewhere I had understanding of what would happen.

"But how have we become gods to sit in judgment on an age? When they killed Kit I would have torn the world apart if I could. But that rage could not last forever. In the beginning we only wanted freedom—not destruction for ourselves and all the others."

"An accident of history has led to this day and hour," said the tired old man. "Have we no right to undo that accident?"

"And kill a hundred million by starvation in the first month?"

"I have lived too long. I will be the first."

"No. I need you. That is what I came to arrange for tonight. Under penalty of the most abhorrent death I can bring you I want your help. And perhaps you know what Martha and John are doing, too?"

"The anthropomorphs?"

"Yes. They have almost succeeded. We'll give them all the time that's possible before turning on the transmitter. If they can make suitable forms for themselves you will put their brains into those forms and let them go. Perhaps it's only a small chance but they want to live. For me there's only Kit."

"I'll do it gladly," said Dr. Jurgens. "I pray for their success but the time is very short."

"I'll leave the frog. You may call if there is need," said Al.

CHAPTER XIX

Rebirth

AL withdrew. He knew that John and Martha had heard nothing of what took place between him and Jurgens. They were intent upon their work. He returned to the laboratory in search of them.

In the instant of his return, a pang of memory burned through him with a moment's incandescence. For there, standing erect in the center of the room, was Martha—his sister as he had once known her.

He understood. They had succeeded in their work—gloriously and miraculously succeeded but for a moment the scene had almost made him forget.

He glanced at the still rippling liquid within the vat from which she had just stepped. Droplets coalesced upon her naked body and sparkled in the brilliant light.

She raised her arms and ran her fingers through the wet, golden hair. Droplets trickled down her arms.

"Sis—it's beautiful! *You're* beautiful!"

Slowly she let her arms fall to her sides. Her eyes looked down upon the creation that she and John had made. With the perfection of their moulding technique, they had built up almost cell by cell the exquisite planes and curves and hollows in duplication of Martha's own body.

"You were right the first time, Al," she murmured. *"It's* beautiful. Like something hammered out of marble with our hands. And just as cold and fruitless. It's not me."

The clear and gentle voice broke suddenly. She clutched her flesh cruelly in her hands and turned her face upward and they looked into her crying eyes.

"I have no right to be anything but dead! There's no womb to prove there's life in me. I'll be a puppet at the end of a string, pretending to smiles and tears that can have no meaning."

John remembered that moment when he'd stood alone in the shadow in the city and watched the people passing by. Martha was uncovering for herself the vast and hidden secret of loneliness and he could not help her. Perhaps her loneliness was deeper and more remote in her barrenness, but a man's yearning was no less poignant.

"It's a strange life, he said, "but not an unpleasant one. I walked along the streets and I felt like a man—even in that guise that I wore."

She straightened suddenly and rubbed away the tears from her face. "I'm terribly sorry. I'm being a fool. I should be thankful that I don't have to spend the rest of my life in that tiny box. Bring yours out, John. I hope it is as wonderful as this we have made for me."

There was a struggling within the second vat and the figure moved stiffly out and stood erect at last upon the floor. "The legs," said John. "We spent all our artistry on yours. These feel like solid hickory!"

"It's old age, darling!" Martha laughed in sudden spontaneous joy.

She wasn't alone any more, Al thought. Amusement filled him as he looked upon the figure John had made. It looked forty pounds heavier than the old John and was filled in Spartan proportions. The godlike figure now matched Martha's classic inheritance.

"What will we do," said Martha, "about getting our brains removed from the control systems and put into these forms? I've worried about how it can be done."

"I've arranged it," said Al. "Jurgens will do it."

"Dr. Jurgens!"

Al explained the arrangement with the cyberneticist and the explanations of Jurgens' actions.

"I'm convinced that what he says is true now. In one way he's played us like chess pieces. Yet somehow I don't see how it could have come out any other way. I'll call him at daybreak. He may be able to get in here tomorrow. I guess he'd better bring some clothes along|

too—unless you can put together some molecules and make yourself some."

"Don't get him here too soon, Al," said Martha. "Yours is nearly finished, but not quite. Another half day will finish it."

FOR the first time Al gave attention to the last vat that was the nucleus of complex equipment. Dimly his own face seemed mirrored there beneath the liquid. It was serene and still. Like death, he thought.

"No," he said slowly. "I'm not going to take that. I don't want it. You—you have each other. I have Kit. I want her. I have to go where she is."

"No!" Martha cried. "You can't mean to cut off your life like the switching of an energy beam."

"I don't think it's like that at all," he said quietly. "I think it's going—somewhere. And Kit's looking for me. If she's still sick she needs me to make her well."

They felt the futility of argument. His voice would permit them none.

While a moment's dreadful silence endured between them, they caught a faint and distant cry. "Al—Al!"

"What's that?" said John. "Who—"

"Jurgens!" Al's mind leaped out, reaching for contact with the frog he had left in the old man's room. He touched and John and Martha were but a moment behind.

They scanned the scene within the scientist's bedroom. His hair was almost invisible against the pillow beneath his head. But the faint purple cast of his flesh showed against it. The cast of death—neuron blast.

It took a moment to comprehend, then Martha spoke the thought of all of them. "There just isn't *anybody* else, is there? No one at all whom we could trust!"

Al thought of the godlike figures back in the laboratory. Martha had been right. She had known they were but dead things. She had never believed they held a semblance of life.

"It means the Institute knows," said John quietly. "They would not have murdered Jurgens without suspecting his relationship with us. They must be on the way to destroy our brains now. You've got to get the transmitter in operation!"

"Yes," murmured Al. "It's the one thing left to us. Jurgens is dead and the one thing left is the act that he planned. I wonder if by some fantastic power of his own private gods he seized us at the moment of our birth and drove us to this hour."

"Come on!" cried John. "Is the transmitter ready?"

"Ten minutes to warm up—"

The transmitter was a vast and complex thing hidden deep within the mountainous structure that was the plant that Al controlled. Its building in utter secrecy was testimony of the more than human genius that was within them, John thought.

Through the frogs they felt Al's thoughts and impulses go out to it. They sensed the fall of mighty power switches. And then—

—*chaos!*

They had all but forgotten that their own minds would be subject to the corrupting energy of that mighty transmitter.

The reminder was sharp. Like a falling knife of infinite momentum it severed their minds from the controlling tapes which had fed in the cybernetic commands for so long. It was swift paralysis, so swift that its stunning left no pain.

But their minds, so long familiar with the tens of thousands of tubes and vats and furnaces within the plants—their minds envisioned the creeping ruin.

The fires would spread and batches of components would burst their vessels. The stores of raw materials would blast and burn and melt in a chemical flood of corroding fury.

"Al," Martha called. *"Al!"*

In the sudden silence she reached out and found—nothing. Her voice was like a scream. *"Al!"*

"Wait," said John. "I can see the control station."

He moved the frog closer to where Al's brain lay within its platinum case. Martha saw it too.

"He wanted to be sure that nothing would keep him from Kit," said John softly. "He arranged for the transmission beam to trigger the nutrient mechanism, cutting the flow."

"Al, take me with you too."

For a moment, sharp anger and pain bit into John at Martha's impulsive "me." It was almost as if she had forgotten him in the last minutes of their lives.

But she turned back to him and he felt the warmth of her emotion. There was nothing in her mind that he could not probe, and he knew and understood the impulses that drove her.

IN their minds they pictured momentarily the scene that existed now in all the cybernetic plants of the Earth. From the dream worlds of schizophrenic brains the great factories were racked with suicidal commands. The flow of materials twisted and spilled, wrecking the engines that shaped them into food and luxuries. Atomic destruction flared from the energy centers.

"There's nothing more that we can do, is there?" said Martha sadly.

"Unless we stop the pumps."

"No—let's wait as long as we can. It will be slower here than elsewhere. This plant may last quite a while. Let's take the Oscars and go into the city and walk in our familiar places once more."

It was not quite dawn and they secured clothing in a house whose occupants were gone. Outside again they watched the distant skyline. From General Biotics a fog of poison vapor spread into the morning sky. Billowing yellow smoke burst from a score of other points—the destruction of machines with insanity at the helm.

And over the face of the whole Earth the same. In a single blow the Welfare State was gone—just as Seymour Jurgens had planned it. In a week men would begin to starve and kill.

John wondered even now if it had had to be that way, if there weren't some other answer. The memory of his people told him there was none.

They moved toward the city but already the terror was rising there. They could hear it in the cries and the sounds of the city, which were like those of a wounded animal. There was the shriek of cars driven in panic, the distant bursts of exploding things, the muted fearful voices of the people.

"We can't get any farther," said John. "There's too much traffic. We haven't much more time."

"All right. Let's sit here on the hill. We can watch the sun come. Remember the last time we did it?"

"*This* is the last time. Let's remember it."

They sat on a grassy slope with their backs against a large rock. He put his arm about her waist and held her head against his shoulder.

"This is real," said Martha. She dug her fingers into the flesh of her leg and watched the white and red marks appear. She pressed his hand and explored his palm with her fingers.

"This is you and I, isn't it, darling?" she said. "That other—back there—it's nothing but a bad dream that never happened."

"That's all it is," he murmured. His cheek rested against the soft hair of her head. He let his mind slip back to the control room where the brains lay.

"Don't, John! Stay here—for just as long as there is."

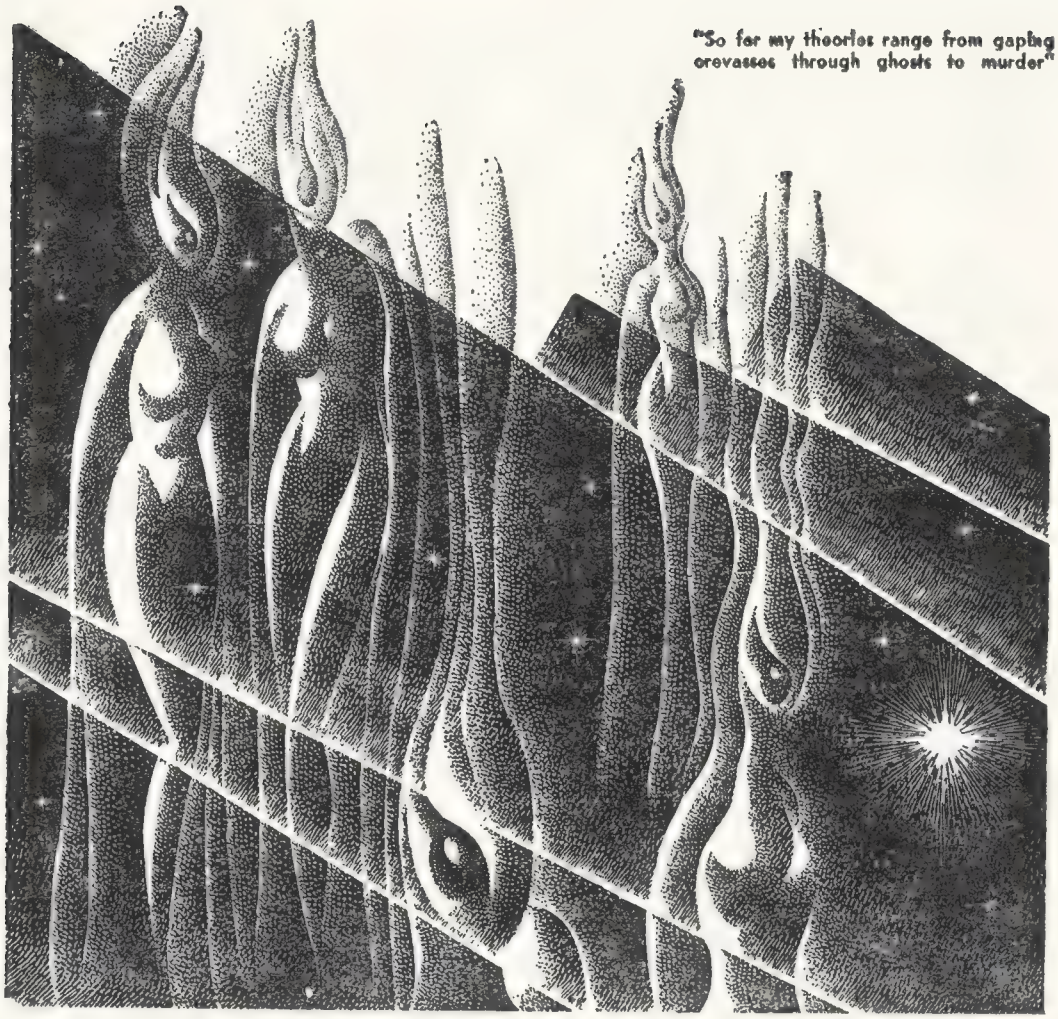
"Yes. There's only a moment more. The flood of molten chemical is almost into the control rooms."

"You haven't even kissed me," she said with mock petulance. "It's not every day that you get a complete new me!"

Laughing, he bent her backwards in his arms and at that moment he saw her eyes slowly close and the laughter fade from her face. He felt only the tiniest shudder go through her body and then she was limp in his arms.

"Martha!"

He was crying then but only for a little while. After a time his dark head slowly relaxed against her golden one. Those who fled the city in the dawn saw their figures against the hill and enviously thought them a pair of lovers who had fallen asleep in each other's arms.



"So far my theories range from gaping crevasses through ghosts to murder"

WALKING on Caffron Beach in the planet Azul's watery blue-green twilight Magnus Ridolph was confronted by a scowling man of formidable appearance—very tall, very broad, with thundercloud eyebrows, a mouth and jaw like an ore-crusher.

"Are you Magnus Ridolph?" The tone was direct with overtones of bellicosity.

Magnus Ridolph wondered which of his creditors had been so importunate as to pursue him out here on the quiet blue sand beside Veridical Sea. Unfortunate—impossible to avoid him now.

Magnus Ridolph said frankly, "I am he."

The carbuncle eyes of the scowling man bored into Magnus Ridolph's pale blue ones. "I understand you're a detective."

Magnus Ridolph pursed his lips thoughtfully, touched his neat white beard. "Why, I suppose that term might be used. Generally I refer to myself as—"

The scowling man looked off across

The Threat of Manual Labor Forces a Space

COSMIC HOTFOOT

a Magnus Ridolph Story

by JACK VANCE

the ink-black water. "I don't care what you call yourself. John Southern recommended you."

"Ah, yes," Magnus Ridolph nodded. "I remember him. The statues in the King of Maherleon's harem."

The big man's scowl deepened. "You're not what I expected."

"Intelligence, facility, resourcefulness are not like neckties, to be displayed as ornaments," Magnus Ridolph pointed out.

"Maybe you can angle and argue but can you produce when the going's tough? That's what I want to know."

Confident that the man, no matter how unpleasant, was no bill collector Magnus Ridolph said affably, "That depends upon the circumstances."

The big man's expression became slightly contemptuous.

Magnus Ridolph said easily, "The circumstances include a feeling of sympathy with my client. So far you have aroused no such sensation."

The big man grinned. "I arouse what

Adventurer to Solve the Riddle of Jexjeka!

sympathy I need by writing my name to a check. My name is Howard Thifer. I'm in the heavy metal business."

Magnus Ridolph nodded. "I have heard your name mentioned."

"Probably as a high-flying free-wheeling financial hell-raiser."

"I believe the term 'unscrupulous blackguard' was used," said Ridolph.

Thifer made an impatient gesture with a forearm the size of a rolled-up welcome mat. "Never mind about that. The squealing of scalded shoats! I'm up against something fantastic. Something I can't fight. It's costing me money and I've got to lick it."

"Suppose you describe your problem."

Thifer turned the full gaze of his red-brown eyes on Magnus Ridolph. "This is confidential, understand? If anything leaked out there'd be trouble for both of us. Get me?"

Magnus Ridolph shrugged, started to move away, across the pale blue beach. "I find that your proposition does not interest me."

A HAND like a bear paw descended on his shoulder. In outrage Magnus Ridolph swung around. "Hands off, sir!"

Thifer said with a heavy leer, "At the Green Lion Hostel two process servers are waiting for you. They've got a multiple notice of judgment."

Magnus Ridolph chewed at his lip. "That confounded zoo," he muttered. Aloud, "Mr. Thifer, what is the nature of your problem, and how much are you able to pay?"

"First of all," said Thifer, "I'll warn you that if you take on this job there's a good chance you'll be killed. In fact you'll certainly be killed unless you do better than the last twenty men. You see, I'm being frank with you. Are you still interested?"

Magnus Ridolph remarked that if his death were a necessary adjunct to the solving of the mystery he feared that his fee would have to be disproportionately large.

Thifer said, "Well, here's the set-up. I own a planet."

"A planet *in toto?*"

"Yes," said Thifer roughly. "I own Jexjeka. I'm—quite wealthy."

Magnus Ridolph sighed. "I am not. My zoo is unsuccessful. It has cost me a great deal."

"Hm. So that howling menagerie of monsters is your doing?"

"No longer. I've sold the whole affair for two hundred munits."

Howard Thifer snorted, a sound that would have fractured the larynx of an ordinary man. "Here's the situation—or better, come aboard my ship, where I can show you on the chart."

"Jexjeka is rock, all rock," said Thifer. "There are what I call oases—four springs of good water. Only water on the planet. Two in each hemisphere, as you see. My headquarters is here"—he pointed—"at A, closest to the mines."

"Heavy metals?"

"I'm mining a crystal of pure tungsten the size of a house. I've got an open-pit of selenium oxide and I'm working a three-foot vein of centaurium trioxide, with uranium. But that's neither here nor there," he said impatiently. "About two years ago I decided to make Jexjeka self-sustaining."

Magnus Ridolph frowned. "A planet all rock?"

Thifer said, "It's airless, lifeless—not even spores. But I'm using Thalurian labor—anaerobes from Thaluri Second. They eat like wolves and it costs me real money keeping them in supplies.

"I figured to plant some of the native vegetation at the oases, have them grow some of their own food. So I freighted in soil, planted an orchard of Thalurian trees, the fiber things with the glass leaves. Now, see here at oasis B, the closest to A—this is where I set out the first orchard, also a meadow for the Thalurian cows." He sat back, glowered at the chart.

"And?" Magnus Ridolph prompted.

"It's what I can't understand. It puzzles me. Everything went beautifully. The trees give bigger crops than they do on Thaluri Second. The cows—I call 'em that, they're big barrels with long

legs for hanging on to the rocks—they multiplied like rabbits, really prospered."

Magnus Ridolph scanned the chart, glanced up into Thifer's big flat face. "Clearly I am dense. You have spoken at length and I still fail to understand your problem." He smoothed the front of his neat white and blue tunic.

Thifer scowled. "Let's understand each other, Ridolph. I'm not paying you for sarcasm. I don't like to be the butt of your jokes, anybody's jokes."

Magnus Ridolph inspected him coolly. "Calm yourself, Mr. Thifer. Your display of temper embarrasses me."

Thifer's face swelled with dark blood. He clenched his hands, then in a low thick voice he said, "About a year ago I decided to expand my orchard to oasis C. On the night of June thirteen, Earth-time, every man at the oasis disappeared. They vanished off the face of the planet as if they'd never been there. There were two Earthmen, a Rhodopian clerk, four Thalurians."

"Any ships missing?"

"No, nothing like that. We were mystified, naturally. An investigation told us nothing. But I still went ahead, expanded the farm to oasis D. Eighty-four days after the first disappearance the same thing happened.

"Every man vanished without trace from both C and D. No sign of violence, no struggle, no hint of any kind as to what happened. Naturally camp routine was disrupted. The Thalurians, as you may know, are a very superstitious bunch—easily frightened. The second disappearance set them off into a serious demonstration. I finally got them quiet and imported a crew of men I could trust from another working.

"I sent this crew out to C and D. Eighty-four days after the previous disappearance they disappeared, the whole bunch—lock, stock and barrel. Gone into thin air—expect there's no air on Jexjeka. And at each disappearance went all the Thalurians I was able to persuade out to C and D to tend the orchard and the cows—and likewise all the cows."

Magnus Ridolph asked, "Have you appealed to the TCI?"

THIFER sounded his gargantuan snort. "That gang of scroungers? You know what they told me? They told me I had no business on Jexjeka in the first place. That, since it lay outside the legal bounds of the Commonwealth, they had no legal right to investigate. And mind you, every eighty-four days citizens of the Commonwealth were disappearing into nowhere. They wouldn't even turn their heads to spit in my direction."

Magnus Ridolph rubbed his beard. "You're sure there is not some simple explanation? The men are not working with a gang of hijackers or blackbirders?"

Thifer said, "Nonsense!" and glowered indignantly at Magnus Ridolph.

Magnus Ridolph said, "I agree that you have given me an interesting story. I suppose your idea is that I take up residence at either C or D, risking my own disappearance?"

"That's right."

Magnus Ridolph said slowly, "Actually I have outlived my usefulness. If I am to be killed on Jexjeka my only concern is for my creditors. I would not care to have the stigma of debt soil my memory.

"Hm—you say that there are two process-servers waiting at the hostel? Well, I will be modest. Give me a check for ten thousand munits and satisfy the process-servers and I will undertake your problem for you."

Thifer growled, "Just what do you owe these process-servers?"

"I'm not sure," said Magnus Ridolph, looking blandly at the chart. "The bill was merely provisions for the creatures in my zoo."

"Provisions for how long?"

"Four months—no longer."

Thifer considered. "That shouldn't be too much. Very well, I'll do it."

"I'll write out a quick agreement," suggested Magnus Ridolph. He did so and Howard Thifer, after grumbling about the delay, put his signature to it.

Together they left the cruiser, returned to the Green Lion Hostel in the Vale of Tempe at the head of Caffron Beach.

Two young men, sitting in the lobby, jumped to their feet at the sight of Magnus Ridolph, advanced upon him like terriers.

"Gentlemen, gentlemen!" said Magnus Ridolph, holding his hands up in mock dismay. "There is no need for your unpleasant documents. Are you empowered to accept a settlement?"

"We'll settle for the exact sum of the judgment, not one cent less."

"Mr. Thifer here will pay you. Please submit him your bill."

Thifer pulled out a checkbook. "How much is it?" he rumbled.

"One hundred and twenty-two thousand, six hundred and twenty munits. Make it payable to Vanguard Organic Supply of Starport."

Thifer turned to Magnus Ridolph with a terrible slow fury. "You lying swindling old goat!"

" 'Goat,' " said Magnus Ridolph, "is an epithet I dislike. Others have regretted its use. My beard is an affectation, I agree. Aside from this beard I have no hircine characteristics."

Thifer's eyes were level pools of hot fire. "You told me this bill was for animal food. You tricked me into—"

"No such thing!" protested Magnus Ridolph. "You need merely read the statement these gentlemen will hand you."

Thifer reached across, snatched a sheet of paper from the process-server, who protested feebly. The sheet read:

"To Magnus Ridolph, statement of indebtedness, as per invoice below, covering deliveries during last quarter.

100 kg. candied ceegee eggs @ M80/kg.	M 8,000
200 liters sap (from Yellow-Bounding Tree of Lennox IV) @ M45/liter..	9,000
One ton live chancodilla grubs @ M4,235/ton	4,235
Two tons slime from bed of Lanklark Sinkhole @ 380/ton	760
50 lbs. California raisins, first quality @ M1/lb.	50
100 cases ripe ticholama buds from Naos VI @ M42/case	4,200
20 frozen tea-mandrakes @ M600	12,000

400 cartons—"

Thifer flung back the statement. He said briefly to Magnus Ridolph, "I won't pay it."

Magnus Ridolph said, "I have no choice but to sue for breach of contract. And in addition you will be denied the pleasure of my disappearance from your oases C and D."

"True," said Thifer. "It's worth many times the money to assist, even in a small way, at your disappearance. I warn you, Ridolph, I'm not a forgiving man." He turned to the process-server. "How much was that again?"

"One hundred twenty-two thousand six hundred and twenty munits."

"Here's your check." He jerked his head to Magnus Ridolph. "Have your luggage sent out to my cruiser. We're leaving for Jexjeka at once."

"As you wish," said Magnus Ridolph.

DURING the eight-day voyage from Azul in Sagittarius to Jexjeka in Cancer 3/2, Magnus Ridolph spoke to Howard Thifer exactly twice. They lunched together the first day out and agreed to discuss the mystery in the observation dome over coffee.

The discussion began amiably—"a feast of reason, a flow of soul." Before long Magnus Ridolph expressed surprise at the fact that while Thifer had prospected the planet for minerals and organic life he had ignored the possible presence of the inorganic, sometimes supersensory, creatures found on certain planets, even on Earth, where they were known as ghosts.

Here Thifer vented his most devastating snort to date. "John Southern told me you were a detective, not an incense-swinging hoochy-macooch witch-doctor."

Magnus Ridolph nodded philosophically, remarking that his attitude was not unusual. He cited the animal world. Swine, bears, seals among others also took their sensory impressions to be an accurate picture of the world, said Magnus Ridolph.

Thifer's eyes began to glisten. Before long epithets were exchanged and the word 'goat' was used, whereupon Mag-

nus Ridolph rose to his feet, bowed in icy politeness and left the dome.

The lunch and the discussion comprised the two occasions on which Howard Thifer and Magnus Ridolph spoke during the cruise. Only when the ship sank into a glass-smooth basin of what evidently had been a tremendous blister in the basalt did the two once more exchange words. And now Thifer, on his home territory, was inclined to be affable.

"Rock, rock, rock," he said. "Damn impressive planet and not a bad place to live if it had an atmosphere. Not too hot, not too cold. Maybe one of these days I'll set up an air plant, build up some atmosphere. Should make a good tourist planet, wouldn't you say, Ridolph?"

"Very spectacular," agreed Magnus Ridolph. A year or so previously he had seen published in the Augustan Review a list of the settled planets arranged by Arthur Idry, the explorer, in order of their increasingly unearthly and bizarre quality.

Earth was naturally norm, with Fan, Naos VI, Exigencia, Omicron Ceti III, Mallard 42, Rhodope, New Sudan, high on the list. At the bottom were ranged such strange worlds as Formaferra, Julian Wolters IV, Alpheratz IX, Gengillee. Looking now across Jexjeka Magnus Ridolph decided that Idry had missed a good bet for last place on the list.

Jexjeka was the sole satellite of three suns—Rouge, a nearby red giant, Blanche, a white Sol-sized star at a greater distance, and Noir, Blanche's dark companion. Jexjeka revolved around Rouge so that for half of each sidereal year two suns shone during the day. For the other half Rouge shone during the day, Blanche during the so-called night.

Rouge filled half the black sky, a monster ball of molten red whose globular shape was manifest. Indeed its equatorial region seemed to bulge out into the observer's face. The dazzling white disk of Blanche hung slightly to the side. Noir was nowhere visible.

The ship had berthed at the center of a vast shallow basin. The black glass of the floor rose in a gradual catenary to a mile-high rampart of gray rock, at the base of which were a huddle of shiny domes and a tailings pile. Thifer's living quarters were in another dome slightly removed from the mine buildings, beside oasis A, a pool of clear water.

Formed by chemical action in the warm interior of Jexjeka it was conveyed to the surface in the form of vapor, to condense and trickle into a pool, where it gradually evaporated into interstellar space, which here began at the planet's surface. Magnus Ridolph was forced to admit that the planet had a certain mad beauty to it.

Distance on this airless world of gigantic proportions was hard to estimate. The perspectives had a peculiar distorted slant. Magnus Ridolph judged Thifer's dwelling to be a mile distant and he was surprised when the surface car, which trundled along the glass-smooth bed of the blister, required ten minutes to make the trip.

The car entered an airlock. Thifer swung open the door. "We're here."

It was evident that Thifer had devoted neither time nor money to sybaritic niceties. Magnus Ridolph frowned at the unrelieved concrete floor, the blank walls, the rigid furniture.

"Your quarters are this way," said Thifer and led Magnus Ridolph down a hall walled with corrugated aluminum to a room overlooking the pool.

The room was furnished with a narrow bed, a chest of drawers painted gray-green, a straight-back chair painted white.

"You are very wise," Magnus Ridolph observed sagely. "Very sensitive."

"How so?" inquired Thifer.

"You have accurately grasped the personality of the planet and have carried the feeling in its most subtle nuances into the furnishings of your house. Quite correctly you decided that starkness and rigor was the only answer to the blank simplicity of the landscape."

"Mmmph," said Thifer, grinning sourly. "Glad you like it. Most people don't. Damned if I'll spend any money on padding fat buttocks. I made it the hard way—hard work and hard living —and blast it if I'll change my style now."

"Sensible," agreed Magnus Ridolph. "Ah—your food is as unaffected as your accommodations?"

"We eat," said Thifer. "Nothing fancy but we eat."

MAGNUS RIDOLPH nodded. "Well, I think I'll bathe and change clothes. Perhaps you'll have my luggage brought in?"

"Sure," said Thifer. "Bathroom's past that panel. Nice brisk shower does wonders for a man. Piped direct from the pool. Lunch in about an hour."

Reflecting that the sooner he resolved the mystery of Oases C and D the sooner he could return to civilization, at lunchtime Magnus Ridolph announced his intention of immediate investigation.

"Good, good," said Thifer. "You'll need an air-suit and something to get around in. You'll have to go by yourself —I've got a stack of work to attend to. You won't be bothered—there's nobody at either C or D. Getting close to the eighty-fourth day."

Magnus Ridolph nodded in polite acquiescence.

After lunch Thifer fitted him with an air-suit, took him behind the dome to an area cluttered with all types of boats, in varying degrees of repair.

Magnus Ridolph chose a small homemade hopper—two light I-beams welded to form an X and fitted with a plywood platform. The hopper was lifted by jets at the tips of the X, propelled and steered by a jet under the platform. Simple, useful, foolproof.

Armed with a small hand-gun—despite Thifer's assurance that no living creature roamed the planet—Magnus Ridolph climbed on the platform, settled himself in an orderly fashion, tested the power-pack, inspected the fuel cartridge, flicked the switch, jiggled the controls, slowly turned the wing-nut which served as a lift control.

The hopper rose like an elevator. Magnus Ridolph nodded coolly to Thifer, who stood watching him with a poorly concealed grin of amusement, and sent the hopper skidding up on a slant over the great gray pegmatite rampart.

Wilderness, thought Magnus Ridolph —wilderness in the most implacable magnitude. Incomprehensible chaos of black and gray, stained vermilion in the light of Rouge and Blanche. Tables, spires, crevasses the human eye had never been designed to see, the human brain to grasp.

Massiveness in terms of cubic miles, cubic tens of miles. Pillars of crystal threaded with crimson light. Fields of silver-shining gneiss, rippled in accurate sinusoidal waves. Canyons shadowed in the imperturbable black of airless shade. Blisters with polished floors, craters, blowholes. . . .

As Magnus Ridolph flew he asked himself, if there were life on Jexjeka with a volition that permitted settlement at A and B but barred it at C and D, where and how would this life manifest itself? The repetition of the eighty-four-day period indicated cyclical activity, seasonal fluctuation, obedience to some sort of law.

Religious sacrifices? Disease with an eighty-four-day incubation period? Magnus Ridolph pursed his lips skeptically. He halted the hopper, scanned the face of Jexjeka below him, saw a vast obsidian mirror, tilted at ten or fifteen degrees. Ten miles it extended to its edge, where the surface was marred by striated conchoidal ripples.

Magnus Ridolph dropped to twenty feet above the glistening surface. The light from the two suns penetrated the clear glass, flittered and shone from tiny aventurine flakes. Magnus Ridolph landed, alighted, stooped, looked closely at the surface. Clean polished glass, not one puff of dust.

Magnus Ridolph climbed back on the hopper, raised it three feet, let it skid down slope to where the obsidian sur-

face curled up into a lip. Beyond was a precipice. Magnus Ridolph floated over the edge, peered into the darkness. Sight was swallowed in the blackness.

He let the hopper settle—down, down, down, out of the sunlight. He flicked on the lights stapled to the sides of the platform. Down, down, down—at last the bottom of the canyon loomed gray below, rose to meet him.

The hopper came gently to rest like a piece of water-logged wood settling to the dark bed of an ocean. The canyon floor was an unidentifiable black rock with large fibrous gray crystals. Magnus Ridolph looked up, down the stony waste to the edge of his private pool of light. No dust, no evidence that living foot had rested on this secret floor.

RAISING the hopper a few feet over the rock floor he cruised slowly up the canyon. Nothing—bare rock bed, cold, dismal, forlorn. Magnus Ridolph suddenly felt a trace of uneasiness, a clamped-in feeling. He raised the hopper—up, up, up, into the pale red light of Rouge and Blanche, clear of the obsidian plain. He took his bearings and proceeded toward B.

He was impressed by the extent of Howard Thifer's development work. Thirty or forty acres surrounding the pool had been covered with light black loam from Thaluri II and the fiber-trunked trees with the square glass leaves ranged in row after row. On most of these trees orange-brown fruit swelled from the trunks the size of melons, ready for harvest.

On an area set aside for pasture a dozen Thalurian cows crawled, cropping at silver spiny grass. And from the orchard a dozen shiny-skinned Thalurian natives peered at Magnus Ridolph, ducking back behind the glass foliage when he turned to look at them.

They bore a strange resemblance to the cows, Magnus Ridolph noticed, though they stood upright and the cows half-crawled, half-wallowed. Their eyes rose on thick stalks above the headless shoulders, with the food-mouth between the eyes.

Magnus Ridolph alighted from the hopper. The Thalurians bent their eyestalks through the foliage, danced nervously as he approached.

Magnus Ridolph nodded politely, glanced here, there, looked at the pool of water. Nothing of interest—he found it to be merely a pool of water, boiling slightly into the vacuum though the temperature was close to freezing. He returned to the hopper, rose high, headed for C on the other side of the planet.

C appeared identical to B except for the absence of the Thalurians and the Thalurian cows. Peculiar, that resemblance thought Magnus Ridolph—evolutionary kinship. No doubt a similar organic relationship existed among Earth fauna in the eyes of the Thalurians.

He examined the trees. The ripe fruit had burst, releasing hordes of tiny pulsing corpuscles, round and red as pomegranate seeds. They jerked, quivered, urged themselves away from the parent tree.

Magnus Ridolph looked long and carefully through the orchard. He examined it intently, minutely. Nothing—as Thifer had told him, no sign of struggle, no damage, no clues. Magnus Ridolph strolled back and forth seeking tracks, bent grass, broken twigs.

Broken twigs? No—but several of the twigs which might have borne big glass leaves ended in bare nubbins of fiber. There was no sign of the missing leaves at the base of the tree. Magnus Ridolph whistled through his teeth. A few missing leaves might mean much or nothing. Perhaps it was normal for trees to carry leafless twigs. Magnus Ridolph tucked the idea to the back of his mind. He would question Thifer when opportunity offered.

Up in his hopper, away to D. Identical to B and C except that it lay at the foot of a tremendous spike of red granite, which shone like bronze where the dull light of Rouge—a sliver of Rouge bulging over the horizon—struck. D was as deserted as C. A few leaves were missing from some of the trees.

The sliver of Rouge disappeared. Darkness poured down as if the sky were a chute. Magnus Ridolph shivered in spite of the warmed air in his suit. Desolation, solitude, existed only by contrast with a mental picture of what might be.

Such concepts never occurred to a brain in mid-space. Space was tremendous, empty—the ultimate grandeur—but neither dismal nor desolate. The loneliness of the dark orchard at D preyed on the brain only because other orchards, warm, fragrant, hospitable, existed.

He flung the hopper high, returned to B, where it was still day. He alighted, examined the trees while the Thalurians hid and watched him with eye-stalks pushed through the glass foliage. Every twig ended in a square brittle leaf.

Back on his hopper, up into airless space. Very little power gave the hopper great speed in the absence of friction. And Magnus Ridolph arrived back at Station A in time for dinner.

Thifer greeted him with initial curiosity, then ignored him, conversing in a belligerent grumbling tone to Smitz, the mine foreman, a thin sad-eyed man with hair like salt-grass. Magnus Ridolph, at the far end of the table, ate sparingly of cucumbers and a poorly-seasoned pot-pie.

At last Thifer turned to Magnus Ridolph with an amused sardonic expression as if, now that important business had been dealt with, other matters could be considered.

"Well," said Thifer, "did you locate your ghosts?"

Magnus Ridolph raised his fine white eyebrows. "Ghosts? I don't understand you."

"You said once that you thought ghosts might be responsible for the disappearances."

"I fear you misinterpreted my words. I spoke on a level of abstraction you plainly did not comprehend. In reply to your question I saw no ghosts."

"See anything at all?"

"I noticed that leaves were missing from some of the trees at C and D. Do you know why this should be?"

Thifer, with a sly wink at Smitz, the foreman, who sat watching Magnus Ridolph with an open smile, said, "Nope. Maybe when the boys disappeared they took the leaves with 'em for souvenirs."

"You may have hit on the correct answer," said Magnus Ridolph evenly. "Some sort of explanation exists. Hm—there are no other planets in the system?"

"Nope. Not a one. Three stars, one planet."

"You're certain? After all, this system, lying outside the Commonwealth, has probably not been surveyed."

"I'm certain. There's just the three stars and Jexjeka."

MAGNUS RIDOLPH considered a moment. Then, "Jexjeka revolves around Rouge and the dark star Noir revolves around Blanche. Am I right?"

"Right as a trivet. And Rouge and Blanche revolve around each other. Regular merry-go-round."

"Ha-ha-ha," laughed Smitz.

"Have you checked the periods of these revolutions?"

"No. What difference does it make? It's about as foolish as your idea about ghosts."

Magnus Ridolph frowned. "Allow me to be the judge of that. After all you have paid a hundred and thirty-two thousand munits for my services."

Thifer laughed. "I've got that all figured out. Don't worry a minute. You'll earn it. If not by detecting you'll do it digging. We pay our men fifteen munits a day, board and room."

Magnus Ridolph's voice was mild. "Do I understand you correctly? That if I am unable to explain the disappearances I refund you your fee through manual labor?"

Thifer's laugh boomed out again and Smitz' drier chuckle joined his merriment.

"You got three choices," said Thifer. "Detect, disappear or dig. D'you think I'm such a patsy as to let you pull what you pulled on me at Azul and get away with it?"

"Ah," said Magnus Ridolph, "you think I dealt with you unfairly. And you brought me to Jexjeka to put me to work in your mines."

"You got it right, mister. I'm a hard man to deal with when I'm crowded."

Magnus Ridolph returned to the cucumbers. "Your unpleasant threats are supererogatory."

"Are *what?*"

"Unnecessary. I intend to solve the mystery of the disappearances."

Thifer's big mouth twisted in the aftermath of his laugh. "I'd say you were sensible."

"One more question," said Magnus Ridolph. "The interval between the disappearances are what?"

"Eighty-four days. A little over a year—a Jexjeka year, that is. The year is eighty-two days of twenty-six Earth hours each."

"According to this interval, when would the next critical night be due?"

"In—let's see—four days."

"Thank you," said Ridolph and addressed himself to his cucumbers.

"Got any ideas?" Thifer asked.

"A large number. It is the basis of my method. I examine every conceivable hypothesis. I make an outline, expanding the sub-headings as fully as possible. If I am sufficiently thorough among these hypotheses will be actuality.

"So far my theories range from crevasses gaping to engulf the men through ghosts to your murdering these men yourself for some purpose of your own. Possibly insurance."

Smitz' chin dropped, dangled, wobbled. He darted a startled glance at Thifer, drew slightly away.

Thifer's face was a blank blotch of tough leathery flesh. "Anything's possible," he said.

Magnus Ridolph made a pedantic gesture with his fork. "Many things are not possible. Your concept of ghosts—pseudo-religious bogies—is impossible. Mine is not. I'll grant that if your kind of ghosts were possible they would enjoy haunting Jexjeka. It is the bleakest most chilling world I have ever seen."

"You'll get used to it," said Thifer grimly. "A hundred and thirty-two thousand munits, at fifteen munits a day, is—eighty-seven hundred days. You're lucky I throw in board, room, work-clothes."

Magnus Ridolph rose. "I find your humor difficult to enjoy. Excuse me, please." He bowed and left them. As the door slid back into place he heard Thifer's booming laugh and Smitz' ready cackle. And Magnus Ridolph smiled quietly.

Four days to the critical night. Magnus Ridolph commandeered the hopper, flew high, flew low across the planet. He landed at the poles—to the north a slanted field of basalt steps, hexagonally fractured. To the south an undulating scoriaceous plain. Footprints here would leave marks for all eternity. But the prairie lay smooth as lamb's-fleece for miles.

He explored valleys and clefts, landed the hopper on razor-keen mountain crests, looking down into the black, black-pink and gray-pink tumble. Nowhere did he find a trace of the vanished men.

He studied stations C and D with eyes that saw each square inch as a discreet area, alone and individual. And beyond the disappearance of the glass leaves, he found no circumstance which could be considered suggestive.

THE fourth day arrived. At breakfast Thifer engaged Magnus Ridolph in jovial conversation, plied him with questions about his ill-fated zoo, remarked several times at the surprising expense of feeding the exotic animals. Magnus Ridolph replied curtly. The mystery had eaten at his sheath of equanimity. And in spite of a distaste for using himself as bait he could conceive no other method by which the puzzle might be resolved.

He loaded the hopper with such equipment as he considered might be useful—plastron rope, a grenade-rifle, a case of condensed provisions, tanks of water, brandy, an infra-red viewer, binoculars, a high-pressure atomizer which he loaded with fluorescent dye,

thinking that if invisible creatures manifested themselves, he could discern that nature by spraying them with dye. Also included was a portable TV transmitter by means of which he planned to keep in touch with Thifer.

Thifer watched the preparations with detached amusement. At last Magnus Ridolph was ready to depart. As if by sudden thought he looked ingenuously toward Thifer. "Perhaps you'd like to accompany me? You must be curious."

Thifer snorted his mastodonic snort. "Not *that* curious! I was curious to the extent of a hundred thirty-two thousand munits, that's enough."

Magnus Ridolph nodded regretfully. "Well, goodby."

"Goodby," said Thifer. "Turn on the transmitter as soon as you arrive. I want to see what happens."

The hopper rose on its four cross-arms. The propulsive jets took hold, the little platform slid off across the waste.

Thifer watched the hopper become a pink mote, then returned inside the dome. He removed his air-suit, brewed a gallon of tea, sat beside the telescreen.

Two hours later the call-light glowed. Thifer pushed the switch. A view of C appeared on the screen and he heard Magnus Ridolph's voice.

"Everything is about as usual. No sign of anything strange. I'm hovering at twenty feet. Trip lines are threaded entirely around the oasis. A snake could not approach without signaling its presence. The sun is setting, as you see."

"I think I'll turn on the flood-lights." Thifer saw a sudden increase of illumination. "At intervals I plan to spray the area with the fluorescent dye. If anything more solid than the vacuum is present it should show up."

Magnus Ridolph's voice faded off. And Thifer, watching intently, saw the view on his screen change as Magnus Ridolph slid the hopper here and there around the oasis.

Darkness came, dead black sightlessness beyond the reach of the floodlights. On Thifer's screen the oasis showed in harsh black and white contrast, the glass leaves on the trees glinting and twinkling like spray. Several hours passed, during which, at intervals Magnus Ridolph made terse reports.

"Nothing unusual. No disturbance of any sort."

Then Thifer heard him say, in a tone of puzzlement, "There's a peculiar feeling—indescribable. A presence of—"

The words broke off, the view in the screen gave a tremendous blurring swing.

Thifer was gazing into blackness. He slowly arose. "Mmph," he muttered. "Looks like the old goat earned his money the hard way."

The following day when he made a cautious survey of C, there was no sign of Magnus Ridolph, his hopper or any of his equipment. Magnus Ridolph had disappeared as completely as if Destiny had reached back in time and erased the fact of his birth.

Thifer shrugged. It was a mystery. Evidently it would remain a mystery as he intended to spend no more money and endanger no more men towards its solution. Farm C and D eighty days out of the year, abandon them during the dangerous nights. The only sensible thing to do.

Two days passed. On the night of the second day Thifer sat with Smitz the mine foreman and Edson the chief engineer at the long dining table. Dinner had been cleared away. The three were discussing a small refining plant at the mouth of the centaurium mine. A model stood on the table before them, mugs of beer were at hand.

The door opened, Magnus Ridolph entered quietly, nodded. "Good evening, gentlemen. Busy, I see. Go right ahead. Don't let me interrupt."

"*Ridolph!*" bellowed Thifer. "Where have you been?"

Magnus Ridolph raised his eyebrows. "Why, pursuing my mission, of course."

"But—you disappeared!"

MAGNUS RIDOLPH stroked his beard complacently. "In a sense, yes. But only temporarily as you see."

Thifer frowned and his red-brown eyes bored at Magnus Ridolph. Sudden-

ly they glowed, became dangerously hot. "Do you mean to tell me you sneaked off the station?"

Magnus Ridolph made a brusque angry gesture. "Silence, man, silence! How in thunder can I talk while you bleat like a sheep?"

Thifer's face took on the maroon tinge of near-hysteria. In the lowest of voices he said, "Go ahead. It had better be good."

Said Magnus Ridolph, "I disappeared —just as all your other men disappeared. I was taken by the same agency that took them."

"And what is this agency?"

Magnus Ridolph settled into a chair. "It is a large black object. It exerts a tremendous urgency. It will brook no contrary will."

"Get to the point, Ridolph!"

"It is the dark star Noir—the world which you erroneously believe revolves around the white sun."

"But it does!" cried Thifer blankly. "You can see it in opposition and it eclipses"—his voice became a murmur —"every eighty-four days."

"The dark star follows a very peculiar orbit," said Magnus Ridolph. "An orbit in the shape of a figure-eight—around Blanche, across, around Rouge. The orbit brings it only a few thousand miles outside the orbit of Jexjeka. Close enough for its gravity to sweep the face of Jexjeka clean."

"Nonsense," snapped Thifer. "Impossible. If it came close enough to counter the gravitational field of Jexjeka it would pull the whole planet after it."

Magnus Ridolph shook his head. "Jexjeka is nine thousand miles in diameter. At the surface Noir's gravity is stronger than that of Rouge combined with the gravity of Jexjeka. At the center of the planet, forty-five hundred miles away, Rouge's gravity is dominant and Jexjeka continues in its orbit, though there are perturbations.

"Jexjeka's year is eighty-two days. Noir's cycle is eighty-four days, so that every year it passes Jexjeka at a different spot in the orbit. In ten or fifteen more years, Jexjeka should be far enough around so that when Noir swings around in back of Rouge, the effect should no longer be dangerous."

Thifer frowned, drummed on the table. He looked up at Magnus Ridolph. "What happened to you?"

"Well, first I felt a peculiar visceral sensation of lightness, which increased with amazing speed. Noir approached, passed very swiftly. Then I felt as if I were falling head downward. So I was —falling away from Jexjeka to Noir. The support-jets of the hopper, which had been turned against Jexjeka, were adding to the acceleration.

"I suppose a half-minute passed before I grasped what was occurring. And then I was out in space, falling against a great black sphere."

"Why can't we see it," said Thifer sharply. "Why is it not visible, like a moon?"

Magnus Ridolph considered. "Noir probably is composed of cold star-stuff —dovetailed protons, incredibly heavy, surrounded by an envelope of compacted gas which absorbs most of the incident light."

"Well," grumbled Thifer, "that may or may not be. Go on with your story."

"There's not much more to it. I righted the hopper, turned on all the power at hand. It was just barely enough to edge me back toward Jexjeka. It took two days to return."

"I suppose all the other men are dead?"

"I don't see how they could possibly have survived."

For a few moments there was silence in the room. Then Thifer pounded on the table with a fist like a small tub. "Well, if so, that's that. We know what it is and we can be careful."

"Such being the case," said Magnus Ridolph, "I have fulfilled my obligation to you. I have given you your money's worth. Now I would appreciate your returning me either to Azul or to one of the Gamma Scorpionis planets, whichever is more convenient to you."

Thifer growled. "There's an ore ship leaving pretty soon. You can stow aboard that."

Magnus Ridolph's eyebrows leveled. "How soon is pretty soon?"

"Depends on how fast we load her, how the ore runs. A month or two, maybe a little longer if we don't bring in a new vein."

"And where does this ore-ship unload?"

"At our plant on Hephaestos."

Magnus Ridolph said mildly, "That would be as inconvenient for me as Jexjeka."

"Sorry," said Thifer. "Right now I can't take time off to send you back. I've got other things to think of. That dark star—"

The engineer spoke. "Just what are you thinking of, chief?"

Thifer said slowly, "I don't know. I don't see that there's much we can do except leave and take everything movable with us every time the dark star comes around." He thudded his fist thoughtfully on the table. "Damned nuisance."

Magnus Ridolph said, "An orbit such as Noir's—a figure-eight—must be in the most exquisite balance. A comparatively slight force might have the effect of changing the orbit completely. It's very rare, the figure-eight—in fact I've never seen anything like it before."

THIFER looked at him woodenly and then comprehension dawned. "If Noir were slowed just a trifle while approaching Blanche it might change its orbit from a parabolic-type curve to an ellipse." He looked at his engineer. "What do you think, Edson?"

"Sounds reasonable," said Edson blinking rapidly.

"Maybe a big atomic explosion?" suggested Thifer. "Think there'd be enough jolt?"

Edson grimaced. He disliked being put on the spot. "Well—the system must certainly be in delicate adjustment. Like a big boulder balanced on its end. Blow it, it falls over."

Thifer stood up with excitement in every deep line of his face. "We'll try it! Think of it! Think of the headlines! 'Howard Thifer changes star's orbit to protect men.' Sounds good, hey, men? Good publicity.

"By golly, Ridolph"—and he thumped Magnus Ridolph's thinly-fleshed back—"you *do* come up with an idea once in a while!" He turned to the foreman. "We got lots of atomite around, haven't we?"

Smitz nodded. "Lots of centaurium too. There's about five hundred tons waiting to be shipped."

"Crate it up. All of it. We'll use the atomite as a primer. We'll drop it on the front side of Noir. A two-billion-ton kick in the teeth for Noir."

He thought, added "Best time to drop the bomb is right now while it's leaving Rouge, approaching Blanche. Get her after the swing-around, she might start circling Rouge, and that would be bad. Yep, we'll drop her right now. Get busy, boys, this is something I want to do."

The explosion! A horrible rending blast, whiter than the heart of Blanche —Thifer and Magnus Ridolph witnessed it on the telescreen, from an image transmitted by Edson in the ore-ship.

Thifer in his excitement thumped Magnus Ridolph on the back. Magnus Ridolph moved away. Thifer bellowed into the mesh, "Did it do any good? Can you tell yet?"

"Hard to say," came Edson's voice. "We'd have to wait awhile—a few hours at least. Say chief." His voice took on a peculiar note. "The explosion is spreading—spreading fast. It's like the whole star's caught fire."

And in the screen Thifer and Magnus Ridolph saw the face of Noir glowing, glistening, blasting out in white lambent gouts.

"What's going on?" roared Thifer. "What did you do?"

"Nothing, chief!" came Edson's remote voice. "Looks like we've got a little nova."

Thifer turned his boar's head toward Magnus Ridolph. His voice was low, quiet. "What's going on out there, Ridolph?"

Magnus Ridolph scratched his beard thoughtfully. "Evidently the energy of the explosion has jarred loose some of

the protons of the star-matter and they're escaping with a great deal of kinetic energy. No doubt some of the energy has been molded—by the tremendous positive charge—into free electrons. I wouldn't be surprised if the entire star flares up. I don't imagine the blast has appreciably affected the orbit."

"How so?"

"If you slowed it it would fall toward Blanche in a steeper parabola, snap back at a steeper angle. I'm afraid all that you could possibly do was disturb the balance of the system. On its next time around it might even collide with Jexjeka. In any event it will singe us rather thoroughly.

"Of course there's no need for alarm. A nova of this time should die down to nothing in a few years more or less. And then your mines can be operated again as good as new." He rose to his feet. "Right now I think I'll pack my baggage. The sooner we leave Jexjeka the better."

"Ridolph," whispered Thifer, "was this one of your tricks? If so I'll kill you with my two hands."

Magnus Ridolph raised his eyebrows. "Trick? The explosion was your idea."

"By your suggestion."

"Pooh!" said Magnus Ridolph. "I came out to Jexjeka for one purpose, to find where your men were disappearing. I did so. Thereupon you refused to return me to a civilized center, electing instead to drop bombs on a dark star."

"At your suggestion," repeated Thifer meaningfully.

MAGNUS RIDOLPH smiled thinly. "That statement has no legal foundation of truth. However, I suggest that instead of bickering with me you commence evacuating your crew. If Noir becomes a nova in actuality—even a small one—Jexjeka will be uncomfortably warm the next time it passes." He turned toward the door, paused.

"It might be wise to keep the publicity at a minimum. The new agencies would be apt to ridicule you mercilessly." Magnus Ridolph half-closed his eyes. " 'Dark star fights fire with fire! Thifer smokes self out.' "

"Shut up," said Thifer. "Get out."

" 'Thifer gives self cosmic hotfoot. Thought it was dark star, says miner,' " said Magnus Ridolph, passing through the doorway.

"Get out!" yelled Thifer. *"Get out!"*

On a pendulum of space and time, Peter Owen swings back to yesterday as he frantically attempts to find a tomorrow worth living in AS YOU WERE, by Henry Kuttner, a novelet of astonishing surprises featured in the August issue of our companion magazine—

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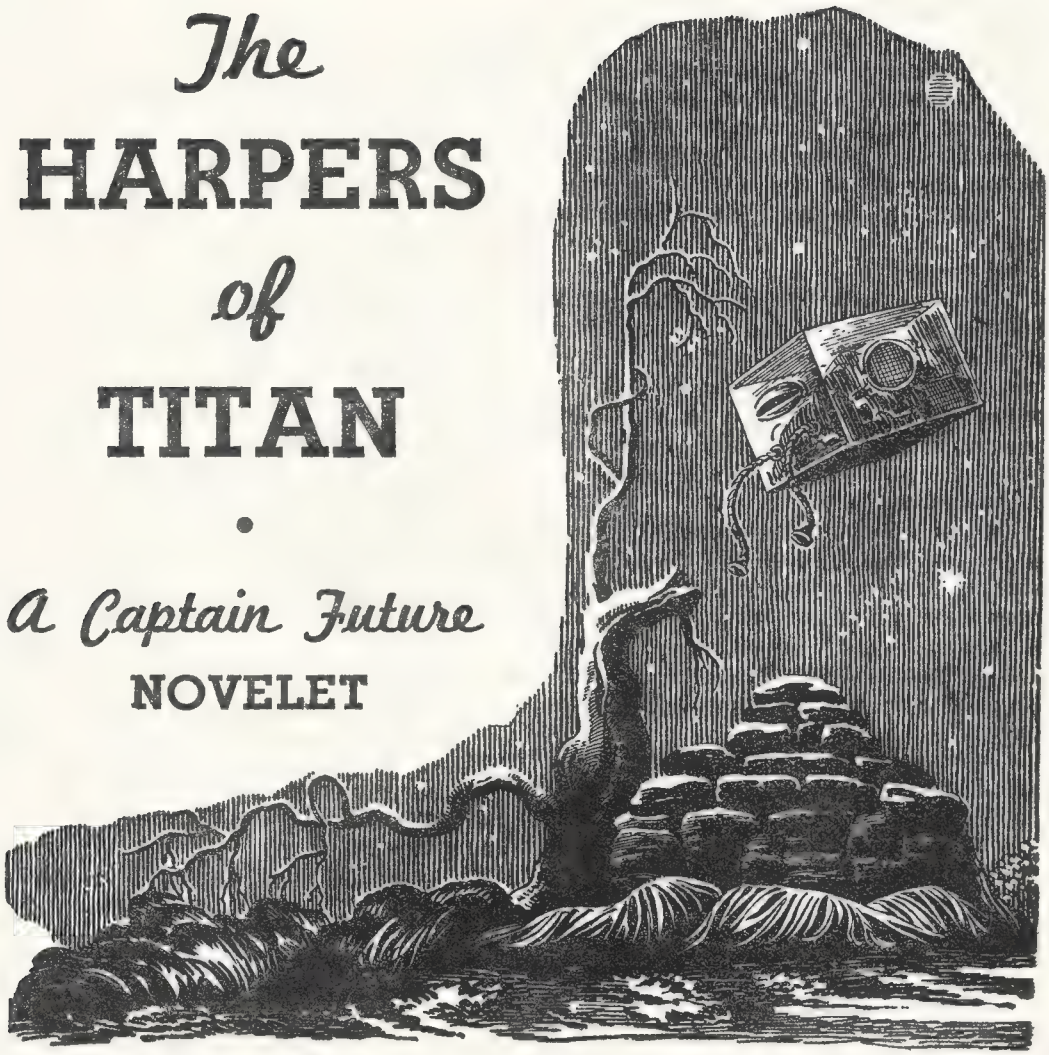
A Captain Future NOVELET



CHAPTER I

Shadowed Moon

His name was Simon Wright, and once he had been a man like other men. Now he was a man no longer, but a living brain, housed in a metal case, nourished by serum instead of blood, provided with artificial senses and means of motion.

The body of Simon Wright, that had known the pleasures and the ills of physical existence, had long ago mingled with the dust. But the mind of Simon Wright lived on, brilliant and unimpaired.

THE ridge lifted, gaunt and rocky, along the rim of the lichen forest, the giant growths crowding to the very crest and down the farther slope into the valley.

Here and there was a clearing around what might once have been a temple, now long fallen into ruin. The vast ragged shapes of the lichens loomed above it, wrinkled and wind-torn and sad. Now

By EDMOND HAMILTON

Again Simon Wright, the "Brain," lives in a human body, and in that guise contends with the most hideous peril he has ever faced—a menace driving a planet to madness!

Simon Wright watched, a small square shape of metal, hovering on silent beams

and again a little breeze came and set them to rustling with a sound like muted weeping, shaking down a rotten, powdery dust.

Simon Wright was weary of the ridge and the dun-gray forest, weary of waiting. Three of Titan's nights had passed since he and Grag and Otho and Curt Newton, whom the System knew better as Captain Future, had hidden their ship down in the lichen-forest and had waited here on the ridge for a man who did not come.

This was the fourth night of waiting, under the incredible glory of Titan's sky. But even the pageant of Saturn, girdled with the blazing Rings and attended by the brilliant swarm of moons, failed to lift Simon's mental spirits. Somehow the beauty above only accentuated the dreariness below.

Curt Newton said sharply, "If Keogh doesn't come tonight, I'm going down there and look for him."

He looked outward through a rift in the lichens, to the valley where Moneb

lay—a city indistinct with night and distance, picked out here and there with the light of torches.

Simon spoke, his voice coming precise and metallic through the artificial resonator.

"Keogh's message warned us on no account to go into the city. Be patient, Curtis. He will come."

Otho nodded. Otho, the lean, lithe android who was so exactly human that only a disturbing strangeness in his pointed face and green, bright eyes betrayed him.

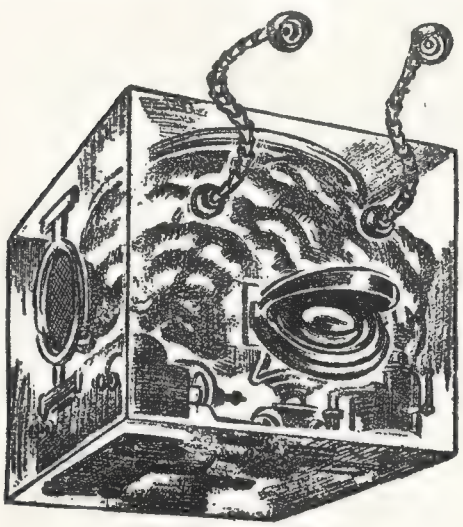
"Apparently," Otho said, "there's a devil of a mess going on in Moneb, and we're liable to make it worse if we go tramping in before we know what it's all about."

THE manlike metal form of Grag moved impatiently in the shadows with a dull clanking sound. His booming voice crashed loud against the stillness.

"I'm like Curt," he said. "I'm tired of waiting."

"We are all tired," said Simon. "But we must wait. From Keogh's message, I judge that he is neither a coward nor a fool. He knows the situation. We do not. We must not endanger him by impatience."

Curt sighed. "I know it." He settled back on the block of stone where he was sitting. "I only hope he makes it soon. These infernal lichens are getting on my nerves."



"THE BRAIN"

Poised effortlessly upon the unseen magnetic beams that were his limbs, Simon watched and brooded. Only in a detached way could he appreciate the picture he presented to others—a small square metal case, with a strange face of artificial lens-eyes and resonator-mouth, hovering in the darkness.

To himself, Simon seemed almost a bodiless ego. He could not see his own strange body. He was conscious only of the steady, rhythmic throbbing of the serum-pump that served as his heart, and of the visual and auditory sensations that his artificial sense-organs gathered for him.

His lenslike eyes were capable of better vision under all conditions than the human eye, but even so he could not penetrate the shifting, tumultuous shadows of the valley. It remained a mystery of shaking moonlight, mist and darkness.

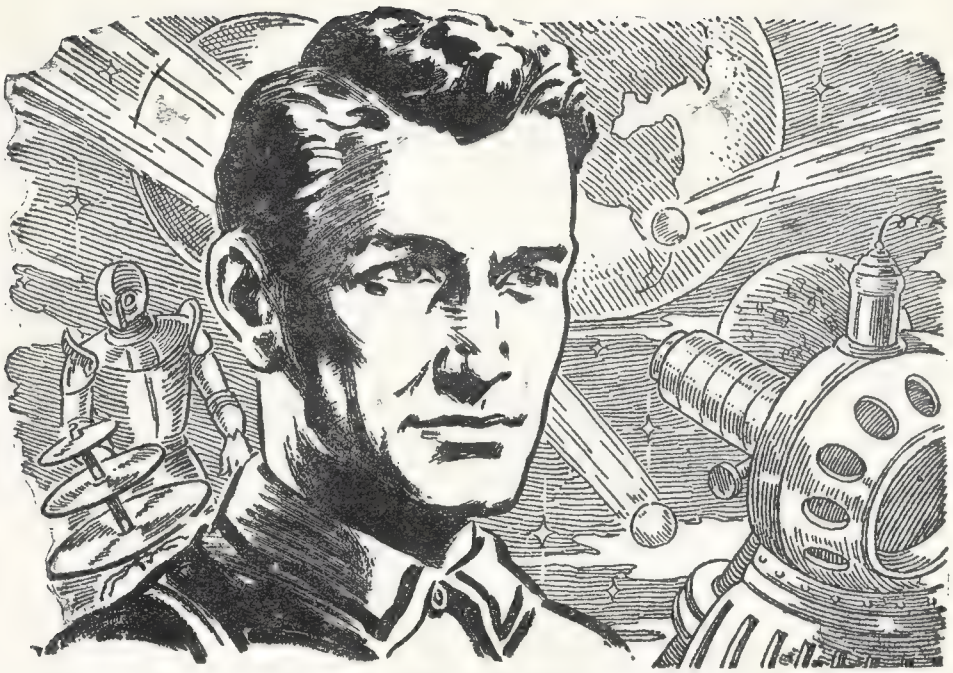
It looked peaceful. And yet the message of this stranger, Keogh, had cried for help against an evil too great for him to fight alone.

Simon was acutely conscious of the dreary rustling of the lichens. His microphonic auditory system could hear and distinguish each separate tiny note too faint for normal ears, so that the rustling became a weaving, shifting pattern of sound, as of ghostly voices whispering—a sort of symphony of despair.

Pure fancy, and Simon Wright was not given to fancies. Yet in these nights of waiting he had developed a definite sense of foreboding. He reasoned now that this sad whispering of the forest was responsible, his brain reacting to the repeated stimulus of a sound-pattern.

Like Curt, he hoped that Keogh would come soon.

Time passed. The Rings filled the sky with supernal fire, and the moons went splendidly on their eternal way, bathed in the milky glow of Saturn. The lichens would not cease from their dusty weeping. Now and again Curt Newton rose



CAPTAIN FUTURE

and went restlessly back and forth across the clearing. Otho watched him, sitting still, his slim body bent like a steel bow. Grag remained where he was, a dark immobile giant in the shadows, dwarfing even Newton's height.

Then, abruptly, there was a sound different from all other sounds. Simon heard, and listened, and after a moment he said:

"There are two men, climbing the slope from the valley, coming this way."

Otho sprang up. Curt voiced a short, sharp "Ah!" and said, "Better take cover, until we're sure."

The four melted into the darkness.

Simon was so close to the strangers that he might have reached out one of his force-beams and touched them. They came into the clearing, breathing heavily from the long climb, looking eagerly about. One was a tall man, very tall, with a gaunt width of shoulder and a fine head. The other was shorter, broader, moving with a bearlike gait. Both were Earthmen, with the unmistakable stamp of the frontiers on them, and the hardness of physical labor. Both men were armed.

They stopped. The hope went out of them, and the tall man said despairingly, "They failed us. They didn't come. Dan, they didn't come!"

Almost, the tall man wept.

"I guess your message didn't get through," the other man said. His voice, too, was leaden. "I don't know, Keogh. I don't know what we'll do now. I guess we might as well go back."

Curt Newton spoke out of the darkness. "Hold on a minute. It's all right."

CURT moved out into the open space, his lean face and red hair clear in the moonlight.

"It's he," said the stocky man. "It's Captain Future." His voice was shaken with relief.

Keogh smiled, a smile without much humor in it. "You thought I might be dead, and someone else might keep the appointment. Not a far-fetched assumption. I've been so closely watched that I dared not try to get away before. I only just managed it tonight."

He broke off, staring, as Grag came striding up, shaking the ground with his tread. Otho moved in from beyond him,

light as a leaf. Simon joined them, gliding silently from among the shadows.

Keogh laughed, a little shakily. "I'm glad to see you. If you only knew how glad I am to see you all!"

"And me!" said the stocky man. He added, "I'm Harker."

"My friend," Keogh told the Futuremen. "For many years, my friend." Then he hesitated, looking earnestly at Curt. "You will help me? I've held back down there in Moneb so far. I've kept the people quiet. I've tried to give them courage when they need it, but I'm only one man. That's a frail peg on which to hang the fate of a city."

Curt nodded gravely. "We'll do all we can. Otho—Grag! Keep watch, just in case."

Grag and Otho disappeared again. Curt looked expectantly at Keogh and Harker. The breeze had steadied to a wind, and Simon was conscious that it was rising, bringing a deeper plaint from the lichens.

Keogh sat down on a block of stone and began to talk. Hovering near him, Simon listened, watching Keogh's face. It was a good face. A wise man, Simon thought, and a strong one, exhausted now by effort and long fear.

"I was the first Earthman to come into the valley, years ago," Keogh said. "I liked the men of Moneb and they liked me. When the miners began to come in, I saw to it that there was no trouble between them and the natives. I married a girl of Moneb, daughter of one of the chief men. She's dead now, but I have a son here. And I'm one of their councilors, the only man of foreign blood ever allowed in the Inner City.

"So you see, I've swung a lot of weight and have used it to keep peace here between native and outlander. But *now!*"

He shook his head. "There have always been men in Moneb who hated to see Earthmen and Earth civilization come in and lessen their own influence. They've hated the Earthmen who live in New Town and work the mines. They'd have tried long ago to force them out, and would have embroiled Moneb in a hopeless struggle, if they'd dared defy tradition and use their one possible weapon. Now, they're bolder and are planning to use that weapon."

Curt Newton looked at him keenly. "What is this weapon, Keogh?"

Keogh's answer was a question. "You Futuremen know these worlds well—I suppose you've heard of the Harpers?"

Simon Wright felt a shock of surprise. He saw incredulous amazement on Curt Newton's face.

"You don't mean that your malcontents plan to use the *Harpers* as a weapon?"

Keogh nodded somberly. "They do."

Memories of old days on Titan were flashing through Simon's mind; the strange, strange form of life that dwelt deep in the great forests, the unforgettable beauty wedded to dreadful danger.

"The Harpers could be a weapon, yes," he said, after a moment. "But the weapon would slay those who wielded it, unless they were protected from it."

"Long ago," Keogh answered, "the men of Moneb had such a protection. They used the Harpers, then. But use of them was so disastrous that it was forbidden, put under a tabu.

"Now, those who wish to force out the Earthmen here plan to break that tabu. They want to bring in the Harpers, and use them."

Harker added, "Things were all right until the old king died. He was a man. His son is a weakling. The fanatics against outland civilization have got to him, and he's afraid of his own shadow. Keogh has been holding him on his feet, against them."

SIMON saw the almost worshipful trust in Harker's eyes as he glanced at his friend.

"They've tried to kill Keogh, of course," Harker said. "With him gone, there'd be no leader against them."

Keogh's voice rose, to be heard over the booming and thrumming of the lichens.

"A full council has been called for two days from now. That will be the time of decision—whether we, or the breakers of tabu, will rule in Moneb.

And I know, as I know truth, that some kind of a trap has been set for me.

"That is where I will need you Futuremen's help, most desperately. But you must not be seen in the town. Any strangers now would excite suspicion, and you are too well known and—" he glanced at Simon and added apologetically, "distinctive."

He paused. In that pause, the boom and thunder of the lichen was like the slatting of great sails in the wind, and Simon could not hear the little furtive sound from behind him until it was too late—a second too late.

A man leaped into the clearing. Simon had a fleeting glimpse of copper-gold limbs and a killer's face, and a curious weapon raised. Simon spoke, but the bright small dart was already fled.

In the same breath, Curt turned and drew and fired. The man dropped. Out in the shadows another gun flashed, and they heard Otho's fierce cry.

There was a timeless instant when no one moved, and then Otho came back into the clearing. "There were only two of them, I think."

"They followed us!" Harker exclaimed. "They followed us up here to—"

He had been turning, as he spoke. He suddenly stopped speaking, and then cried out Keogh's name.

Keogh lay face down in the powdery dust. From out his temple stood a slim bronzed shaft little larger than a needle, and where it pierced the flesh was one dark drop of blood.

Simon hovered low over the Earthman. His sensitive beams touched the throat, the breast, lifted one lax eyelid.

Simon said, without hope, "He still lives."

CHAPTER II

Unearthly Stratagem

GRAG carried Keogh through the the forest and, tall man that Keogh was, he seemed like a child in the robot's mighty arms. The wind howled, and the lichens shook and thundered, and it was growing darker.

"Hurry!" said Harker. "Hurry—there may still be a chance!"

His face had the white, staring look that comes with shock. Simon was still possessed of emotion—sharper, clearer emotions than before, he thought, divorced as they were from the chemical confusions of the flesh. Now he knew a great pity for Harker.

"The *Comet* is just ahead," Curt told him.

Presently they saw the ship, a shadowed bulk of metal lost among the giant growths. Swiftly they took Keogh in, and Grag laid him carefully on the table in the tiny laboratory. He was still breathing, but Simon knew that it would not be for long.

The laboratory of the *Comet*, for all its cramped size, was fitted with medical equipment comparable to most hospitals—most of it designed for its particular purpose by Simon himself, and by Curt Newton. It had been used many times before for the saving of lives. Now the two of them, Simon and Curt together, worked feverishly to save Keogh.

Curt wheeled a marvellously compact adaptation of the Fraser unit into place. Within seconds the tubes were clamped into Keogh's arteries and the pumps were working, keeping the blood flowing normally, feeding in a stimulant solution directly to the heart. The oxygen unit was functioning. Presently Curt nodded.

"Pulse and respiration normal. Now let's have a look at the brain."

He swung the ultrafluoroscope into position and switched it on. Simon looked into the screen, hovering close to Curt's shoulder.

"The frontal lobe is torn beyond repair," he said. "See the tiny barbs on that dart? Deterioration of the cells has already set in."

Harker spoke from the doorway. "Can't you do something? Can't you save him?" He stared into Curt's face for a moment, and then his head dropped forward and he said dully, "No,

of course you can't. I knew it when he was hit."

All the strength seemed to run out of him. He leaned against the door, a man tired and beaten and sad beyond endurance.

"It's bad enough to lose a friend. But now everything he fought for is lost, too. The fanatics will win, and they'll turn loose something that will destroy not only the Earthmen here, but the entire populace of Moneb too, in the long run."

Tears began to run slowly from Harker's eyes. He did not seem to notice them. He said, to no one, to the universe, "Why couldn't I have seen him in time? Why couldn't I have killed him—in time?"

For a long, long moment, Simon looked at Harker. Then he glanced again into the screen, and then aside at Curt, who nodded and slowly switched it off. Curt began to remove the tubes of the Fraser unit from Keogh's wrists.

Simon said, "Wait, Curtis. Leave them as they are."

Curt straightened, a certain startled wonder in his eyes. Simon glided to where Harker stood, whiter and more stricken than the dead man on the table.

Simon spoke his name three times, before he roused himself to answer.

"Yes?"

"How much courage have you, Harker? As much as Keogh? As much as I?"

Harker shook his head.

"There are times when courage doesn't help a bit."

"Listen to me, Harker! Have you the courage to walk beside Keogh into Moneb, knowing that he is dead?"

The eyes of the stocky man widened. And Curt Newton came to Simon and said in a strange voice, "What are you thinking of?"

"I am thinking of a brave man who died in the act of seeking help from us. I am thinking of many innocent men and women who will die, unless . . . Harker, it is true, is it not, that the success of your fight depended on Keogh?"

HARKER'S gaze dwelt upon the body stretched on the table—a body that breathed and pulsed with the semblance of life borrowed from the sighing pumps.

"That is true," he said. "That's why they killed him. He was the leader. With him gone—" Harker's broad hands made a gesture of utter loss.

"Then it must not be known that Keogh died."

Curt said harshly, "No! Simon, you can't do it!"

"Why not, Curtis? You are perfectly capable of completing the operation."

"They've killed the man once. They'll be ready to do it again. Simon, you can't risk yourself! Even if I could do the operation—no!"

Something queerly pleading came into Curt's gray eyes. "This is my kind of a job, Simon. Mine and Grag's and Otho's. Let us do it."

"And how will you do it?" Simon asked. "By force? By reasoning? You are not omnipotent, Curtis. Nor are Grag and Otho. You, all three of you, would be going into certain death, and even more certain defeat. And I know you. You *would* go."

Simon paused. It seemed to him suddenly that he had gone mad, that he must be mad to contemplate what he was about to do. And yet, it was the only way —the only possible chance of preventing an irretrievable disaster.

Simon knew what the Harpers could do, in the wrong hands. He knew what would happen to the Earthmen in New Town. And he knew too what retribution for that would overtake the many guiltless people of Moneb, as well as the few guilty ones.

He glanced beyond Harker and saw Grag standing there, and Otho beside him, his green eyes very bright, and Simon thought, I made them both, I and Roger Newton. I gave them hearts and minds and courage. Some day they will perish, but it will not be because I failed them.

And there was Curt, stubborn, reckless, driven by the demon of his own loneliness, a bitter searcher after knowl-

edge, a stranger to his own kind.

Simon thought, We made him so, Otho and Grag and I. And we wrought too well. There is too much iron in him. He will break, but never bend—and I will not have him broken because of me!

Harker said, very slowly, "I don't understand."

Simon explained. "Keogh's body is whole. Only the brain was destroyed. If the body were supplied with another brain—mine—Keogh would seem to live again, to finish his task in Moneb."

Harker stood for a long moment without speaking. Then he whispered, "Is that possible?"

"Quite possible. Not easy, not even safe—but possible."

Harker's hands clenched into fists. Something, a light that might have been hope, crept back into his eyes.

"Only we five," said Simon, "know that Keogh died. There would be no difficulty there. And I know the language of Titan, as I know most of the System tongues.

"But I would still need help—a guide, who knew Keogh's life and could enable me to live it for the short time that is necessary. You, Harker. And I warn you, it will not be easy."

Harker's voice was low, but steady. "If you can do the one thing, I can do the other."

Curt Newton said angrily, "No one is going to do anything of the sort. Simon, I won't have any part of it!"

The stormy look that Simon knew so well had come into Curt's face. If Simon had been able to, he would have smiled. Instead, he spoke exactly as he had spoken so many times before, long ago when Curt Newton was a small red-headed boy playing in the lonely corridors of the laboratory hidden under Tycho, with no companions but the robot, the android, and Simon, himself.

"You will do as I say, Curtis!" He turned to the others. "Grag, take Mr. Harker into the main cabin. See that he sleeps, for he will need his strength. Otho, Curtis will want your help."

Otho came in and shut the door. He glanced from Simon to Curt and back again, his eyes brilliant with a certain acid amusement. Curt stood where he was, his jaw set, unmoving.

SIMON glided over to the cabinets built solidly against one wall. Using the wonderfully adaptable force-beams more skilfully than a man uses his hands, he took from them the needful things—the trephine saw, the clamps and sutures, the many-shaped delicate knives. And the other things, that had set modern surgery so far ahead of the crude Twentieth Century techniques. The compounds that prevented bleeding, the organic chemicals that promoted cell regeneration so rapidly and fully that a wound would heal within hours and leave no scar, the stimulants and anaesthetics that prevented shock, the neurone compounds.

The UV tube was pulsing overhead, sterilizing everything in the laboratory. Simon, whose vision was better and touch more sure than that of any surgeon dependent on human form, made the preliminary incision in Keogh's skull.

Curt Newton had still not moved. His face was as set and stubborn as before, but there was a pallor about it now, something of desperation.

Simon said sharply, "Curtis!"

Curt moved then. He came to the table and put his hands on it beside the dead man's head, and Simon saw that they trembled.

"I can't," he whispered. "Simon, I can't do it. I'm afraid."

Simon looked steadily into his eyes. "There is no need to be. You will not let me die."

He held out a glittering instrument. Slowly, like a man in a dream, Curt took it.

Otho's bright gaze softened. He nodded to Simon, across Curt's shoulder, and smiled. There was admiration in that smile, for both of them.

Simon busied himself with other things.

"Pay particular attention, Curtis, to the trigeminal, glossopharyngeal, facial—"

"I know all about that," said Curt, with a peculiar irritation.

"—pneumogastric, spinal accessory, and hypoglossal nerves," Simon finished. Vials and syringes were laid in a neat row. "Here is the anæsthetic to be introduced into my serum-stream. And immediately after the operation, this is to be injected beneath the dura and pia mater."

Curt nodded. His hands had stopped shaking, working now with swift, sure skill. His mouth had thinned to a grim line.

Simon thought, He'll do. He'll always do.

There was a moment, then, of waiting. Simon looked down at the man John Keogh and of a sudden fear took hold of him, a deep terror of what he was about to do.

He was content as he was. Once, many years before, he had made his choice between extinction and his present existence. The genius of Curt's own father had saved him then, given him new life, and Simon had made peace with that life, strange as it was, and turned it to good use. He had discovered the advantages of his new form—the increased skills, the ability to think clearly with a mind unfettered by useless and uncontrollable impulses of the flesh. He had learned to be grateful for them.

And now, after all these years . . .

He thought, I cannot do it, after all! I, too, am afraid—not of dying, but of life.

And yet, beneath that fear was longing, a hunger that Simon had thought mercifully dead these many years.

The longing to be once again a man, a human being clothed in flesh.

The cold, clear mind of Simon Wright, the precise, logical unwavering mind, reeled under the impact of these mingled dreads and hungers. They leaped up full stature from their graves in his subconscious. He was shocked that he could still be prey to emotion, and the voice of his mind cried out, I cannot do it! No, I cannot!

Curt said quietly, "All ready, Simon."

Slowly, very slowly, Simon moved and came to rest beside John Keogh. He saw Otho watching him, with a look of pain and understanding, and—yes, envy. Being unhuman himself, Otho would know, where others could only guess.

Curt's face was cut from stone. The serum-pump broke its steady rhythm, and then went on.

Simon Wright passed quietly into the darkness.

CHAPTER III

Once Born of Flesh

HEARING came first. A distant confusion of sounds, seeming very dull and blurred. Simon's first thought was that something had gone wrong with his auditory mechanism. Then a chill wing of memory brushed him, and in its wake came a pang of fear, and a sense of *wrongness.*

It was dark. Why should it be so dark in the *Comet?*

From far off, someone called his name. "Simon! Simon, open your eyes!"

Eyes?

Again that dull inchoate terror. His mind was heavy. It refused to function, and the throb of the serum-pump was gone.

The serum-pump, Simon thought. It has stopped, and I am dying!

He must call for help. That had happened once before, and Curt had saved him. He cried out, "Curtis, the serum-pump has stopped!"

The voice was not his own, and it was formed so strangely.

"I'm here, Simon. Open your eyes."

A long unused series of motor relays clicked over in Simon's brain at that repeated command. Without conscious volition he raised his eyelids. Someone's eyelids, surely not his own! He had not had eyelids for many years!

He saw.

Vision like the hearing, dim and blurred. The familiar laboratory seemed to swim in a wavering haze. Curt's face,

and Otho's, and above them the looming form of Grag, and a strange man . . . No, not strange; he had a name and Simon knew it—Harker.

That name started the chain, and Simon remembered. Memory pounced upon him, worried him, tore him, and now he could *feel the fear*—the physical anguish of it, the sweating, the pounding of the heart, the painful contraction of the great bodily ganglia.

"Raise your hand, Simon. Raise your right hand." There was a strained undertone in Curt's voice. Simon understood. Curt was afraid he might not have done things properly.

Uncertainly, like a child who has not yet learned coordination, Simon raised his right hand. Then his left. He looked at them for an endless moment and let them fall. Drops of saline moisture stung his eyes, and he remembered them. He remembered tears.

"You're all right," Curt said shakily. He helped Simon raise his head and held a glass to his lips. "Can you drink this? It will clear away the fog, give you strength."

Simon drank, and the act of drinking had wonder in it.

The potion counteracted the remaining effects of the anæsthetic. Sight and hearing cleared, and he had his mind under control again. He lay still for some time, trying to adjust himself to the all but forgotten sensations of the flesh.

The little things. The crispness of a sheet against the skin, the warmth, the pleasure of relaxed lips. The memory of sleep.

He sighed, and in that, too, there was wonder. "Give me your hand, Curtis. I will stand."

Curt was on one side, Otho on the other, steadying him. And Simon Wright, in the body of John Keogh, rose from the table where he had lain and stood upright, a man and whole.

By the doorway, Harker fell forward in a dead faint.

Simon looked at him, the strong stocky man crumpled on the floor, his face gray and sick. He said, with a queer touch of pity for all humanity, "I told him it would not be easy."

But even Simon had not realized just how hard it would be.

There were so many things to be learned all over again. Long used to a weightless, effortless ease of movement, this tall rangy body he now inhabited seemed heavy and awkward, painfully slow. He had great difficulty in managing it. At first his attempts to walk were a series of ungainly staggerings wherein he must cling to something to keep from falling.

His sense of balance had to undergo a complete readjustment. And the dullness of his sight and hearing bothered him. That was only comparative, he knew—Keogh's sight and hearing had been excellent, by all human standards. But they lacked the precision, the selectivity, the clarity to which Simon had become accustomed. He felt as though his senses were somehow muffled, as by a veil.

And it was a strange thing, when he stumbled or made an incautious movement, to feel pain again.

BUT as he began to gain control over this complicated bulk of bone and muscle and nerve, Simon found himself taking joy in it. The endless variety of sensory and tactile impressions, the feeling of life, of warm blood flowing, the knowing of heat and cold and hunger were fascinating.

Once born of flesh, he thought, and clenched his hands together. What have I done? What madness have I done?

He must not think of that, nor of himself. He must think of nothing but the task to be done, in the name of John Keogh who was dead.

Harker recovered from his faint. "I'm sorry," he muttered. "It was just that I saw him—you—rise up and stand, it—" He did not finish. "I'm all right, now. You don't have to worry."

Simon noticed that he kept his eyes averted as much as possible. But there was a dogged look about him that said he told the truth.

"We ought to get back as soon as you

can make it," Harker said. "We—Keogh and I, have been gone too long as it is."

He added, "There's just one thing. What about Dion?"

"Dion?"

"Keogh's son."

Simon said slowly, "No need to tell the boy. He could not understand, and it will only torture him."

Mercifully, he thought, the time would be short. But he wished that Keogh had not had a son.

Curt interrupted. "Simon, I've been talking to Harker. The council is tonight, only a few hours away. And you will have to go alone into the Inner City, for there Harker is not allowed to enter.

"But Otho and I are going to try to get around Moneb and into the council hall, secretly. Harker tells me that was Keogh's idea, and it's a good one—if it works. Grag will stay with the ship, on call if necessary."

He handed Simon two objects, a small mono-wave audio disc and a heavy metal box only four inches square.

"We'll keep in touch with the audios," he said. "The other is a hasty adaptation of the *Comet's* own repellor field, but tuned for sonic vibrations. I had to rob two of the coil units. What do you think of it?"

Simon examined the tiny box, the compact, cunning interior arrangement of oscillators, the capsule power unit, the four complicated grids.

"The design might have been further simplified, Curtis—but, under the circumstances, a creditable job. It will serve very well, in case of necessity."

"Let's hope," said Curt feelingly, "that there won't be any such case." He looked at Simon and smiled. His eyes held a deep pride and admiration.

"Good luck," he said.

Simon held out his hand. It was long and long since he had done that. He was amazed to find his voice unsteady.

"Take care," he said. "All of you."

He turned and went out, going still a bit uncertainly, and behind him he heard Curt speaking low and savagely to Harker.

"If you let anything happen to him, I'll kill you with my own hands!"

Simon smiled.

Harker joined him, and they went together through the lichen forest, ghostly under the dim, far Sun. The tall growths were silent now that the wind had died. And as they went, Harker talked of Moneb and the men and women who dwelt there. Simon listened, knowing that his life depended on remembering what he heard.

But even that necessity could not occupy more than one small part of his mind. The rest of it was busy with the other things—the bitter smell of dust, the chill bite of the air in the shaded places, the warmth of the sun in the clearings, the intricate play of muscles necessary to the taking of a step, the rasp of lichen fronds over unprotected skin, the miracle of breathing, of sweating, of grasping an object with five fingers of flesh.

The little things one took for granted. The small, miraculous incredible things that one never noticed until they were gone.

He had seen the forest before as a dun-gray monochrome, heard it as a pattern of rustling sound. It had been without temperature, scent or feel. Now it had all of these things. Simon was overwhelmed with a flood of impressions, poignant almost beyond enduring.

HE gathered strength and sureness as he went. By the time he breasted the slope of the ridge, he could find pleasure in the difficulty of climbing, scrambling up over treacherous slides of dust, choking, coughing as the acrid powder invaded his lungs.

Harker swore, shambling bearlike up the steep way among the lichens. And suddenly Simon laughed. He could not have said what made him do so. But it was good to laugh again.

They avoided the clearing by common consent. Harker led the way, lower down across the ridge. They came out onto open ground, and Simon was touched beyond measure to find that he had a shadow.

They paused to get their breath, and Harker glanced sidelong at Simon, his eyes full of a strange curiosity.

"How does it feel?" he asked. "How does it feel to be a man again?"

Simon did not answer. He could not. There were no words. He looked away from Harker, out over the valley that lay so quiet under the shadowy Sun. He was filled with a strange excitement, so that he felt himself tremble.

As though suddenly frightened by what he had said, and all the things that were implicit in that question, Harker turned suddenly and plunged down the slope, almost running, and Simon followed. Once he slipped and caught himself, gashing his hand against a rock. He stood motionless, watching with wondering eyes the slow red drops that ran from the cut, until Harker had called him three times by Keogh's name, and once by his own.

They avoided the New Town. "No use asking for trouble," Harker said, and led the way past it down a ravine. But they could see it in the distance, a settlement of metalloy houses on a shoulder of the ridge, below the black mouth of the mines. Simon thought the town was strangely quiet.

"See the shutters on the windows?" Harker asked. "See the barricades in the streets? They're waiting, waiting for tonight."

He did not speak again. At the foot of the ridge they came to an open plain, dotted with clumps of grayish scrub. They began to cross it, toward the outskirts of the city.

But as they approached Moneb a group of men came running to meet them. At their head Simon saw a tall, dark-haired boy.

Harker said, "That is your son."

His skin a lighter gold, his face a mixture of Keogh's and something of a softer beauty, his eyes very direct and proud, Dion was what Simon would have expected.

He felt a sense of guilt as he greeted the boy by name. Yet mingled with it was a strange feeling of pride. He thought suddenly, I wish that I had had a son like this, in the old days before I changed.

And then, desperately, "I must not think these things! The lure of the flesh is pulling me back."

Dion was breathless with haste, his face showing the marks of sleeplessness and worry.

"Father, we've scoured the valley for you! Where have you been?"

Simon started the explanation that he had concerted with Harker, but the boy cut him short, racing from one thing to another in an urgent flood of words.

"You didn't come, and we were afraid something had happened to you. And while you were gone, they advanced the time of the council! They hoped you wouldn't come back at all, but if you did, they were going to make sure it was too late."

Dion's strong young hand gripped Simon's arm. "They're already gathering in the council hall! Come on. There may still be time, but we must hurry!"

Harker looked grimly over the boy's head at Simon. "It's come already."

With Keogh's impatient son, and the men with him, they hurried on into the city.

Houses of mud brick, generations old, and towering above them the wall of the Inner City, and above that still the roofs and squat, massive towers of the palaces and temples, washed with a kind of lime and painted with ocher and crimson.

THE air was full of smells—of food and the smoke of cooking fires, acrid-sweet, of dust, of human bodies oiled and fragrant and musky, of old brick crumbling in the sun, of beasts in pens, of unknown spices. Simon breathed them deeply, and listened to the echo of his footsteps ring hollow from the walls. He felt the rising breeze cold on his face that was damp with sweat. And again the excitement shook him, and with it came a sort of awe at the magnificence of human sensation.

I had forgotten so much, he thought. And how was it possible ever to forget?

He walked down the streets of Moneb, striding as a tall man strides, his head

erect, a proud fire in his eyes. The dark-haired folk with skins of golden copper watched him from the doorways and sent the name of Keogh whispering up the lanes and the twisting alleys.

It came to Simon that there was yet another thing in the air of Moneb—a thing called fear.

They came to the gates in the inner wall. Here Harker dropped helplessly back with the other men, and Simon and the son of Keogh went on alone.

Temple and palace rose above him, impressive and strong, bearing in heroic frescoes the history of the kings of Moneb. Simon hardly saw them. There was a tightness in him now, a gathering of nerves.

This was the test—now, before he was ready for it. This was the time when he must not falter, or the thing he had done would be for nothing, and the Harpers would be brought into the valley of Moneb.

Two round towers of brick, a low and massive doorway. Dimness, lighted by torches, red light flaring on coppery flesh, on the ceremonial robes of the councilors, here and there on a helmet of barbaric design. Voices, clamoring over and through each other. A feeling of tension so great that the nerves screamed with it.

Dion pressed his arm and said something that Simon did not catch, but the smile, the look of love and pride, were unmistakable. Then the boy was gone, to the shadowy benches beyond.

Simon stood alone.

At one end of the low, oblong hall, beside the high, gilded seat of the king, he saw a group of helmeted men looking toward him with hatred they did not even try to conceal, and with it, a contempt that could only come from triumph.

And suddenly from out of the uneasy milling of the throng before him an old man stepped and put his hands on Simon's shoulders, and peered at him with anguished eyes.

"It is too late, John Keogh," the old man said hoarsely. "It is all for nothing. They have brought the Harpers in!"

CHAPTER IV

The Harpers

SIMON felt a cold shock of recoil. He had not looked for this. He had not expected that now, this soon, he might be called upon to meet the Harpers.

He had met them once before, years ago. He knew the subtle and terrible danger of them. It had shaken him badly then, when he was a brain divorced from flesh. What would it do to him, now that he dwelt again in a vulnerable, unpredictable human body?

His hand closed tightly on the tiny metal box in his pocket. He must gamble that it would protect him from the Harpers' power. But, remembering that experience of years ago, he dreaded the test.

He asked the old councillor, "Do you know this to be true, about the Harpers?"

"Taras and two others were seen at dawn, coming back from the forest, each bearing a hidden thing. And—they wore the Helmets of Silence."

The old man gestured toward the group of men by the king's throne who looked with such triumphant hatred at he whom they thought to be John Keogh.

"See, they wear them still!"

Swiftly, Simon studied the helmets. At first glance they had seemed no more than the ordinary bronze battle-gear of a barbaric warrior. Now he saw that they were of curious design, covering the ears and the entire cranial area, and overlarge as though padded with many layers of some insulating material.

The Helmets of Silence. He knew, now, that Keogh had spoken truly when he told of an ancient means of protection used long ago by the men of Moneb against the Harpers. Those helmets would protect, yes.

The king of Moneb rose from his throne. And the nervous uproar in the hall stilled to a frozen tension.

A young man, the king. Very young,

very frightened, weakness and stubbornness mingled in his face. His head was bare.

"We of Moneb have too long tolerated strangers in our valley—have even suffered one of them to sit in this council and influence our decisions," he began.

Here there was a sharp uneasy turning of heads toward "Keogh."

"The strangers' ways more and more color the lives of our people. They must go—all of them! And since they will not go willingly, they must be forced!"

He had learned the speech by rote. Simon knew that from the way in which he stumbled over it, the way in which his eyes slid to the tallest of the cloaked and helmeted men beside him, for prompting and strength. The dark, tall man whom Simon recognized from Harker's description as Keogh's chief enemy, Taras.

"We cannot force the Earthmen out with our darts and spears. Their weapons are too strong. But we too have a weapon, one they cannot fight! It was forbidden to us, by foolish kings who were afraid it might be used against them. But now we must use it.

"Therefore I demand that the old tabu be lifted! I demand that we invoke the power of the Harpers to drive the Earthmen forth!"

There was a taut, unhappy silence in the hall. Simon saw men looking at him, the eager confidence in young Dion's eyes. He knew that they placed in him their desperate last hope of preventing this thing.

They were right, for whatever was done he must do alone. Curt Newton and Otho could not possibly have yet made their way secretly by back ways to this council hall.

Simon strode forward. He looked around him. Because of what he was, a kind of fierce exaltation took him, to be once more a man among men. It made his voice ring loud, thundering from the low vault.

"Is it not true that the king fears, not the Earthmen, but Taras—and that Taras is bent not on freeing Moneb from a mythical yoke, but in placing one of his own upon our necks?"

There was a moment of utter silence in which they all, king and councilors alike, stared at him aghast. And in the silence, Simon said grimly:

"I speak for the council! There will be no lifting of tabu—and he that brings the Harpers into Moneb does so under pain of death!"

For one short moment the councilors recovered their courage and voiced it. The hall shook with the cheering. Under cover of the noise Taras bent and spoke into the king's ear, and Simon saw the face of the king become pallid.

FROM behind the high seat Taras lifted a helmet bossed in gold and placed it on the king's head. A Helmet of Silence.

The cheering faded, and was not.

The king said hoarsely, "Then for the good of Moneb, I must disband the council."

Taras stepped forward. He looked directly at Simon, and his eyes smiled. "We had forseen your traitorous counsels, John Keogh. And so we came prepared."

He flung back his cloak. Beneath it, in the curve of his left arm, was something wrapped in silk.

Simon instinctively stepped back.

Taras ripped the silk away. And in his hands was a living creature no larger than a dove, a thing of silver and rose-pearl and delicate frills of shining membrane, and large, soft, gentle eyes.

A dweller in the deep forests, a shy sweet bearer of destruction, an angel of madness and death.

A Harper!

A low moan rose among the councilors, and there was a shifting and a swaying of bodies poised for flight. Taras said,

"Be still. There is time enough for running, when I give you leave."

The councilors were still. The king was still, white-faced upon his throne. But on the shadowy benches, Simon saw Keogh's son bent forward, yearning toward the man he thought to be his father, his face alight with a child's faith.

Taras stroked the creature in his hands, his head bent low over it.

The membranous frills began to lift and stir. The rose-pearl body pulsed, and there broke forth a ripple of music like the sound of a muted harp, infinitely sweet and distant.

The eyes of the Harper glowed. It was happy, pleased to be released from the binding silk that had kept its membranes useless for the making of music. Taras continued to stroke it gently, and it responded with a quivering freshet of song, the liquid notes running and trilling upon the silent air.

And two more of the helmeted men brought forth silvery, soft-eyed captives from under their cloaks, and they began to join their music together, timidly at first, and then more and more without hesitation, until the council hall was full of the strange wild harping and men stood still because they were too entranced now to move.

Even Simon was not proof against that infinitely poignant tide of thrilling sound. He felt his body respond, every nerve quivering with a pleasure akin to pain.

He had forgotten the effect of music on the human consciousness. For many years he had forgotten music. Now, suddenly, all those long-closed gates between mind and body were flung open by the soaring song of the Harpers. Clear, lovely, thoughtless, the very voice of life unfettered, the music filled Simon with an aching hunger for he knew not what. His mind wandered down vague pathways thronged with shadows, and his heart throbbed with a solemn joy that was close to tears.

Caught in the sweet wild web of that harping, he stood motionless, dreaming, forgetful of fear and danger, of everything except that somewhere in that music was the whole secret of creation, and that he was poised on the very edge of understanding the subtle secret of that song.

Song of a newborn universe joyously shouting its birth-cry, of young suns calling to each other in exultant strength, the thunderous chorus of star-voices and the humming bass of the racing, spinning worlds!

Song of life, growing, burgeoning, bursting, on every world, complicated counterpoint of a million million species voicing the ecstasy of being in triumphant chorus!

Something deep in Simon Wright's tranced mind warned him that he was being trapped by that hypnotic web of sound, that he was falling deeper, deeper, into the Harpers' grip. But he could not break the spell of that singing.

Soaring singing of the leaf drinking the sun, of the bird on the wing, of the beast warm in its burrow, of the young, bright miracle of love, of birth, of living!

And then the song changed. The beauty and joy faded from it, and into the sounds came a note of terror, growing, growing . . .

IT came to Simon then that Taras was speaking to the thing he held, and that the soft eyes of the Harper were afraid.

The creature's simple mind was sensitive to telepathic impulses, and Taras was filling its mild emptiness with thoughts of danger and of pain, so that its membranes shrilled now to a different note.

The other Harpers picked it up. Shivering, vibrating together and across each other's rhythms, the three small rose-pearl beings flooded the air with a shuddering sound that was the essence of all fear.

Fear of a blind universe that lent its creatures life only to snatch it from them, of the agony and death that always and forever must rend the bright fabric of living! Fear of the somber depths of darkness and pain into which all life must finally descend, of the shadows that closed down so fast, so fast!

That awful threnody of primal terror that shuddered from the Harpers struck icy fingers of dread across the heart. Simon recoiled from it, he could not bear it, he knew that if he heard it long he must go mad.

Only dimly was he aware of the terror

among the other councilors, the writhing of their faces, the movements of their hands. He tried to cry out but his voice was lost in the screaming of the Harpers, going ever higher and higher until it was torture to the body.

And still Taras bent over the Harper, cruel-eyed, driving it to frenzy with the power of his mind. And still the Harpers screamed, and now the sound had risen and part of it had slipped over the threshold of hearing, and the super-sonic notes stabbed the brain like knives.

A man bolted past Simon. Another followed, and another, and then more and more, clawing, trampling, falling, floundering in the madness of panic. And he himself must flee!

He would *not* flee! Something held him from the flight his body craved—some inner core of thought hardened and strengthened by his long divorcement from the flesh. It steadied him, made him fight back with iron resolution, to reality.

His shaking hand drew out the little metal box. The switch clicked. Slowly, as the power of the thing built up, it threw out a high, shrill keening sound.

"The one weapon against the Harpers!" Curt had said. "The only thing that can break sound is—sound!"

The little repeller reached out its keening sonic vibrations and caught at the Harpers' terrible singing, like a claw.

It clawed and twisted and broke that singing. It broke it, by its subtle sonic interference, into shrieking dissonances.

Simon strode forward, toward the throne and toward Taras. And now into the eyes of Taras had come a deadly doubt.

The Harpers, wild and frightened now, strove against the keening sound that broke their song into hideous discord. The shuddering sonic struggle raged, much of it far above the level of hearing, and Simon felt his body plucked and shaken by terrible vibrations.

He staggered, but he went on. The faces of Taras and the others were contorted by pain. The king had fainted on his throne.

Storm of shattered harmonies, of splintered sound, shrieked like the very voice of madness around the throne. Simon, his mind darkening, knew that he could endure no more . . .

And suddenly it was over. Beaten, exhausted, the Harpers stilled the wild vibration of their membranes. Utterly silent, they remained motionless in the hands of their captors, their soft eyes glazed with hopeless terror.

Simon laughed. He swayed a little on his feet and said to Taras,

"My weapon is stronger than yours!"

Taras dropped the Harper. It crawled away and hid itself beneath the throne. Taras whispered,

"Then we must have it from you, Earthman!"

He sprang toward Simon. On his heels came the others, mad with the bitter fury of defeat when they had been so sure of victory.

Simon snatched out the audio-disc and raised it to his lips, pressing its button and crying out the one word, "Hurry!"

He felt that it was too late. But not until now, not until this moment when fear conquered the force of tradition, could Curt and Otho have entered this forbidden place without provoking the very outbreak that must be prevented.

SIMON went down beneath his attackers' rush. As he went down, he saw that the councilors who had fled were running back to help him. He heard their voices shouting, and he saw the boy Dion among them.

Something struck cruelly against his head, and there was a crushing weight upon him. Someone screamed, and he caught the bright sharp flash of darts through the torchlight.

He tried to rise, but he could not. He was near unconsciousness, aware only of a confusion of movement and ugly sounds. He smelled blood, and he knew pain.

He must have moved, for he found himself on his hands and knees, looking down into the face of Dion. The shank of a copper dart stood out from the boy's breast, and there was a streak of red across the golden skin. His eyes met

Simon's, in a dazed, wondering look. He whispered uncertainly:

"Father!"

He crept into Simon's arms. Simon held him, and Dion murmured once more and then sighed. Simon continued to hold him, though the boy had become very heavy and his eyes looked blankly now into nothingness.

It came to Simon that the hall had grown quiet. A voice spoke to him. He lifted his head and saw Curt standing over him, and Otho, both staring at him anxiously. He could not see them clearly. He said, "The boy thought I was his father. He clung to me and called me Father as he died."

Otho took Dion's body and laid it gently on the stones.

Curt said, "It's all over, Simon. We got here in time, and it's all right."

Simon rose. Taras and his men were dead. Those who had tried to foster hatred were gone, and not ever again would Harpers be brought into Moneb. That was what the pale, shaken councilors around him were telling him.

He could not hear them clearly. Not so clearly, somehow, as the fading whisper of a dying boy.

He turned and walked out of the council hall, onto the steps. It was dark now. There were torches flaring, and the wind blew cold, and he was very tired.

Curt stood beside him. Simon said, "I will go back to the ship."

He saw the question in Curt's eyes, the question that he did not quite dare to ask.

Heartsick, Simon spoke the lines that a Chinese poet had written long ago.

"'Now I know, that the ties of flesh and blood only bind us to a load of grief and sorrow.'"

He shook his head. "I will return to what I was. I could not bear the agony of a second human life—no!"

Curt did not answer. He took Simon's arm and they walked together across the court.

Behind them Otho came, carrying gently three small creatures of silver and rose-pearl, who began now to sound ripples of muted music, faint but hopeful at first, then soaring swiftly to the gladness of prisoners newly freed.

* * * * *

They buried the body of John Keogh in the clearing where he had died, and the boy Dion lay beside him. Over them, Curt and Grag and Otho built a cairn of stones with Harker's help.

From the shadows Simon Wright watched, a small square shape of metal hovering on silent beams, again a living brain severed forever from human form.

It was done, and they parted from Harker and went down through the great booming lichens toward the ship. Curt and the robot and android paused and looked back, at the tall cairn towering lonely against the stars.

But Simon did not look back.

NEXT ISSUE'S CAPTAIN FUTURE NOVELET

PARDON MY IRON NERVES

By EDMOND HAMILTON

"This is a strange meeting indeed," the Graff began

DOWN THE RIVER

By MACK REYNOLDS

When the aliens come, Earth finds itself a mere barbarian pawn in the game of galactic empire!

THE space-ship was picked up by Army radar shortly after it entered the atmosphere over North America. It descended rather slowly and by the time it hovered over Connecticut a thousand fighter planes were in the air.

Wires sizzled hysterically between captains of State Police and colonels of the National Guard, between Army generals and cabinet members, between admirals and White House advisers. But before anything could be decided in the way of attack upon the intruder or defense against him the space-ship had settled gently into an empty Connecticut field.

Once it had landed all thought of attack left the minds of everyone concerned with North American defense. The craft towered half a mile upward and gave an uncomfortable impression of being able to take on the armed forces of the United States all by itself, if it so desired, which seemingly it didn't.

As a matter of fact it showed no signs of life whatsoever for the first few hours of its visit.

The governor arrived about noon, beating the representative from the State Department by fifteen minutes and the delegates from the United Nations by three hours. He hesitated only briefly at the cordon which State Police and National Guardsmen had thrown up about the field and decided that any risk he might be taking would be worth the publicity value of being the first to greet the visitors from space.

Besides, the television and newsreel cameras were already set up and trained upon him. "Honest Harry" Smith knew a good thing when he saw it. He instructed the chauffeur to approach the ship.

As the car came closer, escorted cautiously by two motorcycle troopers and the newsreel and television trucks the problem arose of just how to make known His Excellency's presence. There seemed to be no indication of a means of entrance to the spectacular craft. It presented a smooth mother-of-pearl effect that was breathtakingly beautiful —but at the same time cold and unapproachable in appearance.

Happily the problem was solved for them as they came within a few yards of the vessel. What seemed a solid part of the craft's side swung inward and a figure stepped lightly to the ground.

GOVERNOR SMITH'S first shocked impression was that it was a man wearing a strange mask and a carnival costume. The alien, otherwise human and even handsome by our standards, had a light green complexion. It tucked the Roman-like toga it wore about its lithe figure and approached the car smilingly. Its English had only a slight touch of accent. Grammatically it was perfect.

"My name is Grannon Tyre Eighteen-Hundred and Fifty-two K," the alien said. "I assume that you are an official of this—er—nation. The United States of North America, is it not?"

The governor was taken aback. He'd been rehearsing inwardly a pantomime of welcome—with the television and newsreel men in mind. He had pictured himself as holding up his right arm in what he conceived to be the universal gesture of peace, of smiling broadly and often and, in general, making it known that the aliens were welcome to the earth and to the United States in general and to the State of Connecticut in particular. He hadn't expected the visitors to speak English.

However he had been called upon to speak off the cuff too often not to be able to rise to the occasion.

"Welcome to Earth," he said with a flourish that he hoped the TV boys got. "This is an historical occasion indeed. Without doubt future generations of your people and mine will look back on this fateful hour and . . ."

Grannon Tyre 1852K smiled again. "I beg your pardon but was my assumption correct? You are an official of the government?"

"Eh? Er—humph—yes, of course. I am Governor Harry Smith, of Connecticut, this prosperous and happy state in which you have landed. To go on—"

The alien said, "If you don't mind, I have a message from the Graff Marin Sidonn Forty-eight L. The Graff has commanded me to inform you that it is his pleasure that you notify all the nations, races and tribes upon Earth that he will address their representatives exactly one of your Earth months from today. He has an important message to deliver."

The governor gave up trying to hold command of the situation. "Who?" he asked painfully. "What kind of a message?"

Grannon Tyre 1852K still smiled but it was the patient smile you used with a backward or recalcitrant child. His voice was a bit firmer, there was a faint touch of command.

"The Graff requests that you inform all nations of the world to have their representatives gather one month from today to receive his message. Is that clear?"

"Yeah. I guess so. Who—"

"Then that is all for the present. Good day." The green alien turned and strode back to the space-ship. The portal closed behind him silently.

"I'll be double blessed," said Governor Harry Smith a fraction of a second before the television cameras could cut him off the air.

Never before had there been anything like the following month. It was a period of jubilation and fear, of anticipation and foreboding, of hope and despair. As the delegates from all over Earth gathered to hear the message of the visitor from space tension grew throughout the world.

Scientist and savage, politcian and revolutionist, banker and beggar, society matron and street walker, awaited that which they knew would influence the rest of their lives. And each hoped for one thing and feared another.

Newspaper columnists, radio commentators and soap-box speakers dwelt on the possibilities of the message endlessly. Although there were some who viewed with alarm, as a whole it was believed that the aliens would open up a new era for earth.

Scientific secrets beyond the dreams of man were expected to be revealed. Disease was to be wiped out overnight. Man would take his place with this other intelligence to help rule the universe.

Preparations were made for the delegates to meet at Madison Square Garden in New York. It had early been seen that the United Nations buildings would be inadequate. Representatives were coming from races, tribes and countries which had never dreamed of sending delegates to the international conferences so prevalent in the last few decades.

THE Graff Marin Sidonn 48L was accompanied to the gathering by Grannon Tyre 1852K and by a score of identically uniformed green complexioned aliens, who could only be taken for guards although they carried no evident weapons either defensive or offensive.

The Graff himself appeared to be an amiable enough gentleman, somewhat older than the other visitors from space. His step was a little slower and his toga more conservative in color than that of Grannon Tyre 1852K, who was evidently his aide.

Although he gave every indication of courtesy, the large number of persons confronting him seemed irritating and the impression was gained that the sooner this was over the more pleased he would be.

President Hanford of the United States opened the meeting with a few well chosen words, summing up the importance of the conference. He then introduced Grannon Tyre 1852K, who was also brief but who threw the first bombshell, although a full half of the audience didn't at first recognize the significance of his words.

"Citizens of Earth," he began, "I introduce to you Marin Sidonn Forty-eight L, Graff of the Solar System by appointment of Modren One, Gabon of Carthis, and, consequently, Gabon of the Solar System including the planet Earth. Since the English language seems to be nearest to a universal one upon this world, your Graff has prepared himself so that he may address you in that tongue. I understand that translating devices have been installed so that representatives of other languages will be able to follow."

He turned to the Graff, held the flat of his right hand first against his waist and then extended toward his chief. The Graff returned the salute and stepped before the microphone.

The delegates arose to their feet to acclaim him and the cheers lasted a full ten minutes, being stilled finally when the alien from space showed a slight annoyance. President Hanford got to his feet, held up his hands and called for order.

The clamor died away and the Graff looked out over his audience. "This is a strange meeting indeed," he began. "For more than four decals, which roughly comes to forty-three of your Earth years, I have been Graff of this

Solar System, first under Toren One, and, more recently, under his successor, Modren One, present Gabon of Carthis, which, as has already been pointed out by my assistant, makes him Gabon of the Solar System and of Earth."

Of all those present in the Garden Larry Kincaid, of Associated Press, was the first to grasp the significance of what was being said. "He's telling us we're property. Shades of Charlie Fort!"

The Graff went on. "In all of this four decals, however, I have not visited Earth but have spent my time on the planet you know as Mars. This, I assure you, has not been because I was not interested in your problems and your welfare as an efficient Graff should be.

"Rather it has been traditional with the Gabons of Carthis not to make themselves known to the inhabitants of their subject planets until these subjects have reached at least an H-Seventeen development. Unfortunately, Earth has reached but an H-Four development."

A LOW murmur was spreading over the hall. The Graff paused for a moment and then said kindly, "I imagine that what I have said thus far is somewhat of a shock. Before we go on, let me sum it up briefly.

"Earth has been for a longer period than your histories record, a part of the Carthis Empire, which includes all of this Solar System. The Gabon, or perhaps you would call him Emperor, of Carthis appoints a Graff to supervise each of his sun systems. I have been your Graff for the past forty-three years, making my residence on Mars, rather than on Earth, because of your low state of civilization.

"In fact," he went on, half musingly, "Earth hasn't been visited more than a score of times by representatives of Carthis in the past five thousand years. And, as a rule, these representatives were taken for some supernatural manifestation by your more than usually superstitious people. At least it is well that you have got over the custom of greeting us as gods."

The murmur increased within the large auditorium to reach the point where the Graff could no longer be heard. Finally President Hanford, pale of face, stepped before the microphones and held up his hands again. When a reasonable quiet had been obtained, he turned back to the green man.

"Undoubtedly, it will take considerable time for any of us fully to assimilate this. All of the assembled delegates probably have questions which they would like to ask. However, I believe that one of the most pressing and one that we all have in mind is this—

"You say that ordinarily you wouldn't have made yourself known to us until we had reached a development of, I think you said, H-Seventeen—and that now we are but H-Four. Why have you made yourself known to us now? What special circumstances called for this revelation?"

The Graff nodded. "I was about to dwell upon that, Mr. President." He turned again to the quieted world delegates.

"My purpose in visiting Earth at this time was to announce to you that an interstellar arrangement has been made between the Gabon of Carthis and the Gabon of Wharis whereby the Solar System becomes part of the Wharis Empire, in return for certain considerations among the Aldebaran planets. In short, you are now subjects of the Gabon of Wharis. I am being recalled and your new Graff, Belde Kelden Forty-eight L, will arrive in due order."

He let his eyes go over them gently. There was a touch of pity in them. "Are there any other questions you wish to ask?"

Lord Harricraft stood up at his table directly before the microphones. He was obviously shaken. "I cannot make an official statement until I have consulted with my government but I would like to ask this—what difference will it make to us, this change in Graffs, or even this change in—er—Gabons? If the policy is to leave Earth alone until the race has progressed further it will affect us little, if at all, for the time being, will it not?"

The Graff spoke sadly. "While that has always been the policy of the Gabons of Carthis, your former rulers, it is not the policy of the present Gabon of Wharis. However, I can only say that your new Graff, Belde Kelden Forty-eight L, will be here in a few weeks and will undoubtedly explain his policies."

Lord Harricraft remained on his feet. "But you must have some idea of what this new Gabon wants of Earth."

The Graff hesitated then said slowly, "It is widely understood that the Gabon of Wharis is badly in need of uranium and various other rare elements to be found here on Earth. The fact that he has appointed Belde Kelden Forty-eight L, as your new Graff is also an indication, since this Graff has a wide reputation for success in all-out exploitation of new planets."

Larry Kincaid grinned wryly at the other newspapermen at the press table. "We've been sold down the river."

Monsieur Pierre Bart was on his feet. "Then it is to be expected that this Graff Belde Kelden Forty-eight L, under the direction of the Gabon of Wharis, will begin wholesale exploitation of this planet's resources, transporting them to other parts of the Gabon's empire?"

"I am afraid that is correct."

President Hanford spoke again. "But are we to have nothing to say about this? After all—"

The Graff said, "Even in Carthis and under the benevolent rule of Modren One, the most progressive Gabon in the galaxy, a planet has no voice in its own rule until it has reached a development of H-Forty. You see, each Gabon must consider the welfare of his empire as a whole. He cannot be affected by the desires or even needs of the more primitive life forms on his various backward planets. Unfortunately—"

LORD HARRICRAFT was beet red with indignation. "But this is preposterous," he sputtered. "It is unheard of that a—"

The Graff held up his hand coldly. "I have no wish to argue with you. As I have said I am no longer Graff of this planet. However, I might point out to you a few facts which make your indignation somewhat out of place. In spite of my residence on Mars I have gone to the effort of investigating to some extent the history of Earth. Correct me if I am wrong in the following—

"This nation in which we hold our conference is the United States. Is it not true that in Eighteen-hundred-three the United States bought approximately one million square miles of its present territory from the French Emperor Napoleon for fifteen million dollars? I believe it is called the Louisiana Purchase.

"I also believe that at that time the Louisiana Territory was inhabited almost exclusively by Amerindian tribes. Had these people ever heard of Napoleon or the United States? What happened to these people when they tried to defend their homes against the encroaching white man?"

He indicated Lord Harricraft. "Or perhaps I should come closer to home. I understand that you represent the powerful British Empire. Tell me, how was Canada originally acquired? Or South Africa? Or India?"

He turned to Pierre Bart. "And you, I believe, represent France. How were your North Africa colonies acquired? Did you consult with the nomadic peoples who lived there before you took over control of them?"

The Frenchman sputtered. "But these were backward barbarians! Our assuming government over the area was to their benefit and to the benefit of the world as a whole."

The Graff shrugged sadly. "I am afraid that that is exactly the story you will hear from your new Graff Belde Kelden Forty-eight L."

Suddenly half the hall was on its feet. Delegates stood on chairs and tables. Shouts rose, threats, hysterical defiance.

"We'll fight!"

"Better death than slavery!"

"We'll unite for all-out defense against the aliens!"

"Down with other-world interference!"

"WE'LL FIGHT!"

The Graff waited until the first fire of protest had burnt itself out, then held up his hands for quiet.

"I strongly recommend that you do nothing to antagonize Belde Kelden Forty-eight L, who is known to be a ruthless Graff when opposed by his inferiors. He strictly carries out the orders of the Gabon of Wharis, who usually makes a policy of crushing such revolts and then removing the population remaining to less desirable planets, where they are forced to support themselves as best they can.

"I can only add, that on some of the Wharis Empire planets, this is quite difficult, if not impossible."

THE din throughout the hall was beginning to rise again. The Graff shrugged and turned back to President Hanford. "I am afraid I must go now. There is nothing more for me to say." He motioned to Grannon Tyre 1852K and his guard.

"One moment," the President said urgently. "Isn't there anything else? Some advice, some word of assistance?"

The Graff sighed. "I am sorry. It is now out of my hands." But he paused and considered a moment. "There is one thing I can suggest that might help you considerably in your dealings with Belde Kelden Forty-eight L. I hope that in telling you of it, I don't hurt your feelings."

"Of course not," the president muttered hopefully. "The fate of the whole world is at stake. Anything that will help—"

"Well then, I might say that I consider myself completely without prejudice. It means nothing to me if a person has a green skin, a yellow one or is white, brown, black or red. Some of my best friends are unfortunately colored.

"However—well, don't you have any races on this planet with a green complexion? Graff Belde Kelden Forty-eight L is known to be extremely prejudiced against races of different colors. If you had some green representatives to meet him—"

The president stared at him dumbly.

The Graff was distressed. "You mean that you have no races at all on Earth of green complexion? Or, at very least, blue?"

NEXT ISSUE'S FEATURED HEADLINERS

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THE FIVE GOLD BANDS

A Novel of the Spaceways by JACK VANCE

TOUGH OLD MAN

A Novelet of Future Frontiers by L. RON HUBBARD

PARDON MY IRON NERVES

A Captain Future Novelet by EDMOND HAMILTON

The 'lorum lifted its upper pseudopods to make a sort of umbrella

EXIT LINE

By MATT LEE

THE 'lorum lay in its scooped-out pit, basking comfortably in the rays of the system's twin suns. It looked down upon the two earth-children, Martin and Julie, amiably if warily from its upper quarter of lavender eyes. For a moment, as Martin gravely tossed a rubber ball toward it, the 'lorum toyed with the notion of keeping the children here on the yellow planet.

With swiftness beyond the following power of the human eye, the 'lorum

Between the earth colonists and the destructive fury of the invisible mangards, was only the protective shield of the 'lorum—or was it?

stretched out a pseudopod and batted the ball back in a soaring arc that rebounded from the distant courtyard wall. With a quick cry of joy Martin fielded the rebound and came up with the rubber sphere, his feet in position to throw again.

The 'lorum signalled that it had had enough of such play and Martin looked disappointed and bounced the ball down on the floor of the courtyard.

"Gee, Uncle 'Lorum," said the boy, his face contorting in disappointment, "it's our last chance to play together." He glanced over his shoulder at the metal frame of the tall launching tower in which the huge gleaming hull of the space-ship stood erect.

"We still have a little time, Uncle 'Lorum," said Julie. "Tell us a story—you must know just one more."

The 'lorum activated another brain. Yes, it was going to miss them—but as they had been and were, not as they must grow. "Very well," it said. "I'll tell you a story." It never lacked stories to tell, being able to plumb the minds of the adults of the epxedition at will.

Thanks to its universal semantic understanding, it had been able easily to translate earthly fantasies into terms understandable to these space-born children and the only planetary environment they had ever known. Goldilocks' three bears, for instance, became a family of grullahs, the strange chrysanthemumlike three-legged creatures who inhabited the crystal forest beyond the plain.

Giants, of course, were Ardigans, the lumpish silicon-creatures that could tear great stones out of the far cliffs with ease but melted like sand at the stream from an earth-child's water pistol.

Dragons were easy. They were simply mangards—the menace that always lurked just beyond the compound walls ready to overwhelm the now-vast structures of the Earth-creatures and annihilate all life within.

If no earth-creature had ever seen or could see the mangards—well, no one, to judge from the Earth-creatures' minds, had ever actually seen a dragon.

BUT they were real enough. The 'lorum knew. It was the mangards who were at last forcing the Earth-creatures to leave this planet after two long years. It was six years by their count and the children had grown amazingly for this slower life cycle.

"Very well, Julie," it said. "I shall tell you one more story." It plumbed the minds of the adults in other parts of the compounds, found a thought that caused the slash under the lower battery of eyes that passed for a mouth to twitch in approximation of a smile. Martin came over and sat down beside Julie.

"There was once a very great king in a very great kingdom, a ruler of exceedingly ambitious and inquisitive mind," it began. It did not actually speak the words for it had neither larynx nor vocal cords but its telepathic communication was of universal application.

"Not a fairy story, Uncle 'Lorum," said Martin, his head a little to one side. "Tell us a story of real adventure."

"And have a girl in it and a handsome hero," said Julie.

"Mush!" said Martin rudely. "Nothing but silly old mush."

Yes, thought the 'lorum, the children were growing up. It was a pity they did not want to hear the story about the ambitious king. It had an application to the situation here in the compound which was absolutely delicious. But perhaps it was just as well.

The Earth-thing from whose mind it had plucked the fairy tale must have been dangerously close to uncomfortable truth. It would be too bad if there were trouble now.

"No story now," it told the children. "The mangards are making ready for another attack."

Using its telepathic powers, the 'lorum summoned the seven men and four women who, with the children, made up the earth party. They came quickly, pale of face and glancing over their shoulders, leaving the preparations for departure at which they had been busy during the past four days—twenty-three days in Earth time.

They came and sat around the fore-

portion of the 'lorum's body—that portion they called its "head." The 'lorum lifted its upper pseudopods and extended them enough to make a sort of umbrella about the visitors from Earth. Then it caused the purple force to vibrate between their tips in meshlike flashes.

"I hope it's the last time," said Della Lawrence, Martin's mother, as she leaned against her husband and shivered in fright.

Harold Lawrence tightened his arm about her and glanced at his son, who was regarding the events with the boredom of familiarity.

There was a thunderous crash against the screen. The air beneath it acquired a smoky acrid tinge as of great unfelt heat, and there was a brilliant flare of light on its outer surface. He blinked and cowered.

If only the mangards were something they could see, could use Earth weapons against! But they were as invisible as the boojum in Lewis Carroll's *The Hunting of the Snark*—and as deadly. He himself had seen one of the huge and terrifying Ardigans disintegrate like a dream monster just beyond the compound walls.

The 'lorum had been in pitiful shape when first they set jets down on this planet—first to feel the step of man beyond the Proxima Centauri group. It had been fighting the mangards alone and its huge rumpled form had reminded Della of the Cockalorum bird from *Davy and the Goblin*, which she had been reading to Martin and Julie. They had given it the name—and with suitable shortening it had stuck.

Communication had not proved difficult, thanks to the strange creature's telepathy. It had explained that it too was alien to this planet, having traveled in ovoid form from a planet in the Boötes group.

It had warned them against the mangards, had protected them from the first attack of these fantastic invisible entities. In return they had reared the compound according to its directions for a mangard-proof defense, adding bizarre bastions as the 'lorum directed.

But the mangards and the Ardigans, to a lesser degree, had licked them. So much time had to be spent in reinforcing the compounds against the recurring attacks of the mangards that there was small chance to rear a productive peaceful community. Instead of improving with the years conditions had grown steadily worse.

JULIE'S father, Patrick Aloysius O'Hare, one of the most brilliant rough-and-ready field biologists in the system, had spent two years seeking the answer to the ever present threat of the mangards.

"They've got to have some substance," he said ruefully to Harold Lawrence over a highball (synthetic) one evening.

"But you can't spot it?" Lawrence had asked him.

"Not yet," said O'Hare, shaking his head sadly. "I can't dig it out. I've put them through the entire spectrum. I'm beginning to believe in some other dimension."

"You sure you're feeling okay, Pat?" Lawrence had asked.

Even the 'lorum couldn't see mangards. But its extra-sensory talents enabled it to have some understanding of them without sight and, more important, to sense when they were about to attack.

Aware of its vast intelligence and experience Earth people had built the serpentine compounds in accord with its telepathic suggestions. It was, the 'lorum had told them, the only possible hope of foiling the mangards. They were, it seemed, allergic to certain shapes, especially those in ess-curves.

"It is at variance with their molecular structure," the 'lorum had said.

And for awhile it had seemed to work. For more than six earth months there had been no attack at all. But of late the attacks had increased in both frequency and intensity. The gardens had gone to seed, lacking the constant cultivation the climate demanded. Supplies had begun to run dangerously low.

Harold Lawrence, along with the other members of the expedition, could

sense the 'lorum's growing fatigue under the onsets of the hordes of mangard attackers. Sooner or later they would overwhelm the strange huge creature that had appointed itself the guardian of the would-be colonizers from distant Earth. The Lawrence-Cardenas Expedition was going to have to return all the way to Earth or starve slowly out here on an alien planet.

The attack subsided at last and the 'lorum retracted its screen and lay there, a huge and pitiable object of fatigue, its every pseudopod aquiver.

It was then that Lawrence broached the suggestion, " 'Lorum," he said, "we can make room for you in our spaceship."

The 'lorum's thoughts were weak but clear. "I am grateful for your concern, for your wish to take me away from the planet of the mangards. But when you are gone I may again be able to live in peace with them."

"You had best come with us," said O'Hare. There was a trace, just a trace, of suspicion underlying the tones of the biologist.

The 'lorum knew then against whom it had to guard and at once extended its thought powers to blanket the suspicion in the Irishman's mind.

"I had best stay here—where I am suited. A change might not be for the better," said the 'lorum. It thanked them and bade them complete their preparations quickly. Only the children lingered.

They took off late in that same long day, leaving the 'lorum to its own devices on the planet that had been their home for a half dozen earth years. Della Lawrence actually cried a little.

"The poor helpless thing—just sitting there, waiting for those horrible creatures we enraged," she sobbed. It was the first time her nerves had given way.

"I know," said her husband soothingly. "But the 'lorum is pretty smart in its own way. It will take care of itself."

There was doubt in his tone, however, and his son was quick to spot it. The little boy said:

"Don't worry about Uncle 'Lorum. It told us to tell you everything was—what does Jim-dandy mean, Daddy?"

"Yes, what does Jim-dandy mean, Mr. Lawrence?" asked Julie.

"Why—it's archaic Earth slang for fine," said Harold Lawrence. He glanced at his wife and smiled. "Did Uncle 'Lorum have anything else to tell you that you think we should know?"

"Well—yes, Daddy," said Martin. He glanced sheepishly at O'Hare, who had drifted up from his cabin. "It was like a fairy story but it didn't *feel* like a fairy story."

"What did Uncle 'Lorum say—what was it?" O'Hare's voice was sharp with suddenly reawakened suspicion. It was little Julie who broke the silence.

"He told us a story about an ambitious king who wanted a suit of clothes like no other suit in the world," she parrotted. "His tailors couldn't make good-enough ones for him so he cut off their heads. Finally a man came along and said he could make the suit so different that nobody could even see it. . . ."

"Good heavens!" It was O'Hare and there was dawning comprehension in his green Irish eyes. "The Emperor's New Suit!" He gazed at the others, almost pleading. "Funny," he added, "I was thinking of it just before the attack."

"You mean the one about the king who thought he was wearing an invisible suit until the little boy pointed out that he was stark naked?" said Harold Lawrence, frowning.

THEY took the elevator to the control room and adjusted the remote-control scanner on the planet they had just left, now a full three thousand miles behind them.

"Good heavens!" said Lawrence. "Something's happened to the 'lorum. It's spread out all over the compound!"

"I see," said O'Hare sourly. Then, suddenly, he lashed into an outburst of colorful Gaelic profanity.

"Take it easy," said Lawrence. "What's it all about anyway?"

"Can't you see?" asked the biologist, pointing again toward the scanner screen. "Can't you understand that

we've spent six years being the original suckers of the spaceways?"

"Come again?" said Lawrence.

"I'm not crazy," said O'Hare soberly. "Put it together—the 'lorum, the compound, the invisible monsters."

Comprehension dawned slowly in Lawrence's light blue eyes. "Then you mean—"

"I mean the mangards never were," O'Hare replied. "I've been suspecting it more and more lately.

"And now the 'lorum has assumed its natural shape since we are gone."

"Exactly," said O'Hare. "For six long Earth years we have been spending the bulk of our time giving the 'lorum a home to fit its true relaxed shape. During all that time it has remained in defense position, its body balled like that of an armadillo.

"And whenever we began to get at our real work it would stage another mangard attack," said O'Hare, bitter now that full understanding had come to him. "'The Emperor's New Clothes'!"

"But the attacks," protested Harold Lawrence. "Surely—"

"Pfui!" said O'Hare rudely. "There were no attacks. Our friend simply put on a fireworks show to frighten us whenever it thought we needed a spur."

"But I myself saw it destroy an Ardigan with a bolt of electricity," said Lawrence. "Why should it need walls to protect itself from the other life on the planet?"

O'Hare swore again. "When I think of the way we swallowed that hooey about the ess-shape being contrary to the mangards' molecular makeup! The reason it wanted all those ess-shaped bastions was so it could stretch out in comfort. Gentlemen, when bigger suckers are made, we'll be them."

"I'm beginning to understand," said Lawrence. "Our 'lorum is lazy—perhaps the laziest creature of its intelligence in the cosmos. So lazy that it is willing to sit in an unnatural position for two of its years and put on occasional electric shows to keep us building walls to save it in future from having to exert energy to blast wandering Ardigans."

"We can't let it get away with this," said O'Hare.

"We've been had," said Lawrence. "But I don't think we had better *do* anything about it."

"We could plant an A-pellet right in the middle of that thing's patio," said O'Hare, eyes still on the scanner.

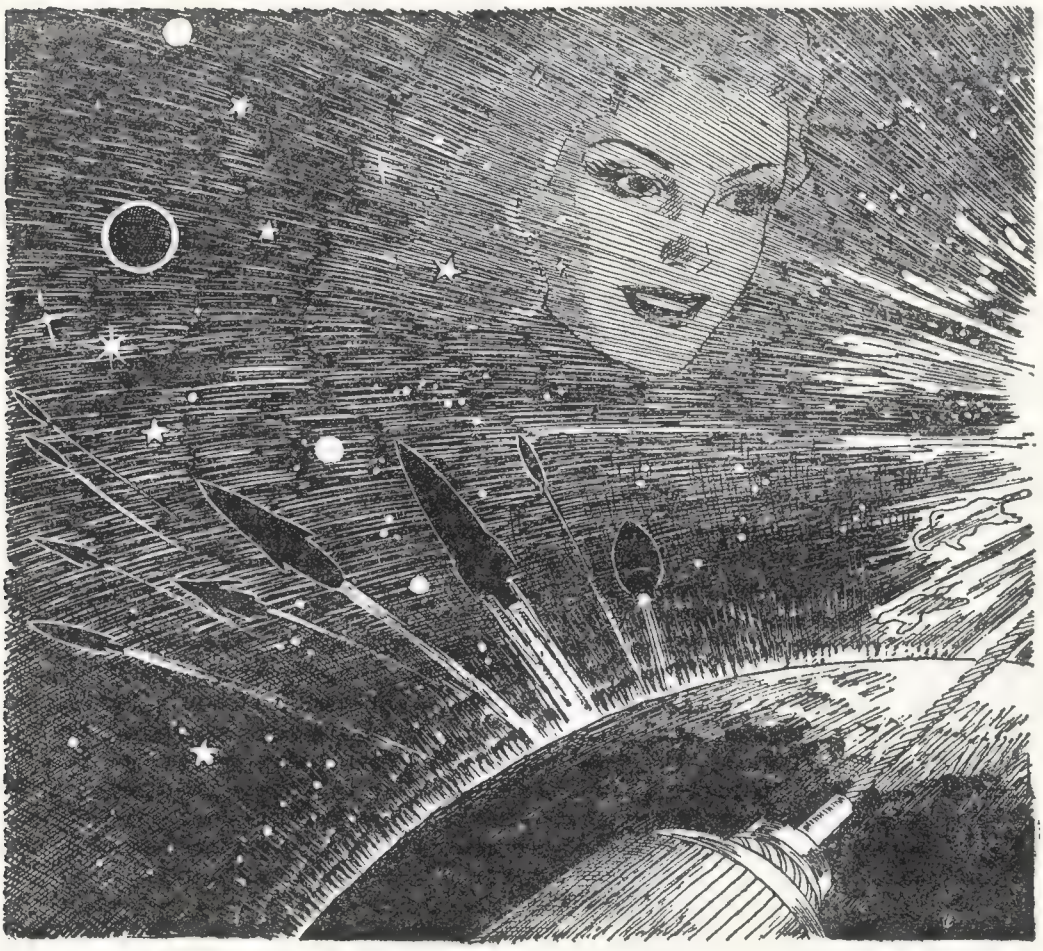
"Somehow," said Lawrence thoughtfully, "I don't think any such measures would work. No creature of the 'lorum's intelligence and telepathic powers would remain long in ignorance of our weapons —and it must by this time have devised its defense."

"Aye, you're right, Harry," said O'Hare sadly. "And the nerve of the creature leaving word with the children to tell us we've been hoaxed."

"There's a lot of ham in the 'lorum," said Lawrence, moving forward to check the control settings. "What an exit line!"

One of the greatest science fiction yarns ever written—IN CAVERNS BELOW, a novel of subterranean adventure by Stanton A. Coblentz—featured in the big Fall issue of FANTASTIC STORY QUARTERLY, on sale at all newsstands! 25c per copy everywhere!

THE ENERGY EATERS



Tony Quade trapped the strange Mercurian creatures in a vain effort to sign Gerry Carlyle for Hollywood on the Moon, and then had to accept her help or die—but Tony had a way of winning the last word . . . .

CHAPTER I

Storm Over Gerry

NOBODY knows exactly what happens when an irresistible force meets an immovable body. Science, with a view to solving that bewhiskered problem, had been eagerly watching the feud between Nine Planets Films, Inc., and Gerry Carlyle, the Catch-'em-Alive damsel. But so far honors had been about even though Gerry's hot temper had become fierier under the strain and Von Zorn, president of the great motion pic-

A Hall of Fame Novelet by

ARTHUR K. BARNES and HENRY KUTTNER

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ture company, had been under a doctor's care for some time.

At the moment he was sitting behind his gleaming glass desk and twitching slightly as he glared at Anthony Quade, ace director and trouble-shooter extraordinary for Nine Planets.

"Look," he said in a deceptively soft voice, "I don't ask for much, Mr. Quade. Just a little cooperation from my staff. All I want is a signature—two short words on this contract. That's not too much to expect from a billion-dollar organization with the cream of the System's technical and promotional brains, is it?"

Quade settled his large big-boned body more comfortably in the chrome-and-leather chair and blinked sleepily. Van Zorn changed his tone and his voice quavered slightly as he went on.

"I'm a sick man, Tony. I can't stand

this continual worry. Somehow I don't think I have long to live—my heart. And all I ask you to do is get a signature on this contract."

"A great act, Chief," Quade said approvingly. "But I've heard it a few dozen times before. I think I'm allergic to your heart. Every time you get angina I find myself dodging Whips on Venus or shooting energy-storms on Mars. I need a vacation."

"Afraid?" Von Zorn asked tauntingly.

"Sure," Quade said. "I've fought hay-wire robots from Pluto. I've handled the worst temperaments on the Moon. I've even brought you pix of the Martian Inferno. But I positively won't risk my life with that—that Roman candle in skirts."

"Think of the box-office!"

"I know. It's worth millions to have Gerry Carlyle tied up in a contract so she won't go off and bring back a cargo of Martian monsters for the London Zoo every time we shoot a Mars epic with robots. I don't like it any better than you do, Chief. That dame scoops us every time—and the public won't look at our robots when they can see the real thing. I can see myself asking Gerry Carlyle to sign the contract."

Von Zorn hesitated. "Tony, I'd ask her myself. Only—"

"Only what?"

"She won't sign."

Quade nodded, frowning. "We've got nothing she wants. You can offer her a fortune and she'd still say no. The only—wait a minute!"

"Maybe. Gerry Carlyle will sell her soul for one thing—a new monster. Something nobody's ever captured or even seen before. Jumping Jupiter, I've got it! If she'll make a flicker for us we'll give her the beast for her Zoo."

Von Zorn said, "And just where do we get this beast?"

"Just leave that to me. I've plenty of technical resources in the labs."

"If you're thinking of a synthetic monster—"

"What I'm thinking of will surprise you," Quade said mysteriously. "Give me thirty days and I'll get you a beast that'll make Gerry Carlyle turn green. Chief, she'll be begging you to let her sign the contract!"

Grinning, Quade went out, leaving Von Zorn licking his lips at the prospect of a defeated and supplicant Gerry Carlyle.

IT was bedlam. Newscaster men swarmed in the office. Photographers snapped their flash-bulbs continually. Questions and shouts filled the place with babel. Through it all the central figure posed gracefully against the massive desk, cool and unperturbed as an iceberg.

She was dressed in mirror-polished high boots, riding pants and polo shirt open at her tanned throat. These were the badges of her profession. For this was the New York office of Gerry Carlyle, grim huntress of fierce monsters on the inhospitable planets of the Solar System, serene and gracious hostess now.

But the occasion was one that tried to the utmost the steel control she placed on her fiery temper. For Gerry, according to the delighted newsmen, had been scooped—and how!

"No two ways about it, Miss Carlyle," said one of the reporters. "This what's-his-name has really got something—a form of life nobody's ever seen before."

"Seeing is believing," said Gerry sweetly.

"Every newscast from the Moon for the last six hours has had something about these jiggers. From Mercury, the guy says."

Gerry quirked up an eyebrow. "I've scoured Mercury's twilight zone twice for life-forms. I've brought back the only living things ever seen by man on the surface of Mercury. I even went over the dark side once."

"These animals come from Hotside."

"That, to begin with, is a bare-faced lie," Gerry smiled. "D'you know what the temperature is on the sunward side of Mercury? No matter what kind of insulation he used in his spacesuit a man's brains would boil in a split second."

"Sure," said the reporter. "But this guy has the creatures, Miss Carlyle. Nobody has ever seen anything like 'em before and he claims they're from Hotside."

"Well, you're just wasting your time, boys, if you've come up here to get my statement. I've already told you it's a hoax."

"Professor Boleur looked 'em over. He says they're the McCoy," persisted the nervy reporter, defying the lightning.

Gerry scowled at this and more flashbulbs went off. Boleur's reputation was unimpeachable, impossible to ignore.

Just then Gerry's secretary came in, looking apprehensive. "A telecall, Miss Carlyle. From—er—from the Moon."

Electric tension filled the room. Gerry took a deep breath, opened her mouth and closed it again. She said very softly, "If it's from Mr. Von Zorn, tell him I'm not in."

"No, it's a Mr. Anthony Quade."

"I've never heard of him," Gerry said witheringly and turned away. But a dozen eager voices informed her that Tony Quade was the man who had brought back the monsters from Mercury, that he was one of the biggest figures in the film industry.

"Really!" said Gerry scornfully and strode into the televisor room, dark eyes narrowed dangerously. The reporters trailed her.

Quade was visible on the screen, leaning negligently forward, puffing on a blackened briar. He opened his mouth to speak but the girl gave him no chance.

"You," she stated, "are Quade, Von Zorn's stooge. For months your unpleasant boss has been after me to make a picture for Nine Planets. Whatever this nonsense is about bringing back a monster from Hotside its purpose is to trick me into signing a contract. The answer is no—but definitely!" The cold incisive words made Quade blink. Obviously he had underestimated this very capable young woman.

He shrugged. "You're quite right, Miss Carlyle—except that there's no trickery involved. It's a straight business proposition. As a rule I don't like to do business with women because they are apt to use their emotions instead of their brains but—but—" Quade paused, eyeing Gerry blandly.

THE girl's lips tightened. For her, "Catch-'em-Alive" Carlyle, to be accused of feminine weaknesses, was insupportable. "Go ahead, Mr. Quade," she said. "I'm listening."

Quade nodded slightly and Von Zorn himself moved into focus. His small simian face was twisted into a somewhat frightful smile. Between cupped hands he held what appeared at first glance, to be a large ball of fur, perhaps a trifle larger than a porcupine. It was amorphous, setting itself constantly into new positions like a jellyfish.

Von Zorn lifted one hand and literally poured the remarkable creature from one palm to the other. As he did so pale orange and blue flickered about the tips of the animal's furlike coat.

Gerry's lips parted to form a round "O." For a moment she stood undecided, her extreme distaste for Von Zorn battling with her natural instincts as a huntress.

Curiosity won. She moved closer to the screen. "It's—something new," she admitted reluctantly. "I've never run across anything just like it. Where did you get it, Mr. Quade?"

"Mercury Hotsides. That's the truth."

SOME stories are forgotten almost as soon as they are printed. Others stand the test of time.

Because "The Energy Eaters," by Arthur K. Barnes and Henry Kuttner, has stood this test, it has been nominated for SCIENTIFICTION'S HALL OF FAME and is reprinted here. In each issue, since Vol. 1, No. 1, we have honored one of the most outstanding fantasy classics of all time as selected by our readers.

This has brought a new permanence to many of the science fiction gems of yesterday and made them available to today's science fiction devotees. . . "The Energy Eaters" concludes this series in STARTLING STORIES, but nominations are still in order for science fiction classics to be printed in our companion magazine, FANTASTIC STORY QUARTERLY.

"Well—how?"

Von Zorn broke in leering slightly. "That's a professional secret."

Gerry looked through the man without apparent difficulty. "What sort of creature is it, Mr. Quade? It hasn't any eyes, nose, ears or limbs as far as I can see."

"Quite right," Quade said. "It has no visible sensory organs. Our labs are working on that angle right now, investigating. If you'd like to examine one of these closely—we have several of 'em—they'll be in the Nine Planets exhibit room on Lunar Boulevard. I'd like to send you one for the London Zoo but—"

Von Zorn broke in. "I can send one to you by spacemail right now, if—" He held up a sheet of paper that was obviously a contract. "If you get what I mean!"

Gerry's rigid control snapped. She struck savagely at the televisor switch and the screen went blank. The reporters surged around her. This was a story! Gerry Carlyle beaten fairly, forced to dicker with her most hated enemy if she wished to keep the reputation of the London Zoo as the only complete collection of the System's life.

Gerry impaled everyone in the room with a scorching glance. "I know what you're thinking," she snapped. "And the answer is no! Finally and irrevocably—no!"

The reporters left with the air of men retreating from the brink of a volcano and presently Gerry Carlyle was alone. The volcano paced the room, seething. After a time Gerry paused and let out a quiet whistle. She called her secretary.

"Yes, Miss Carlyle?"

"Give the London Zoo a call, will you? Tell 'em to send over Volume seven from my private file. By stratosphere plane—I'm in a hurry." Gerry's notebooks, compiled into a library of incredible fact that read like fantasy, were the result of years spent exploring the alien worlds of the System.

She remembered now that during one of her earliest trips she had discovered a microscopic spore that in some respects resembled Von Zorn's importation. Unfortunately she couldn't recall much about it but nevertheless a vague uneasiness gnawed at the back of her mind.

She had a hunch that Von Zorn and Quade were running into trouble.

CHAPTER II

The Prometheans

DR. PHINEAS McCOLM was a small wiry man who was appalled by his unconventional mind. Science to him, was an ever-new and ever-delightful adventure. Often his startling theories had brought down on him the thunderbolts of his colleagues but somehow McColm always had a way of proving his wild guesses—which actually weren't guesses at all. A less capable man could never have become chief of staff for the Nine Planets Films labs.

As though to make up for his mental Bohemianism McColm always wore the most correct garments in a neat and dignified manner and inevitably a pince-nez dangled by a black ribbon from his lapels. He had never been known to look through them, however, since, despite his years of experiment in eye-straining laboratory work and the fantasy magazines he read for relaxation, he had the eyesight of a hawk.

Right now he was sitting in Von Zorn's office, reading a copy of STARTLING STORIES. He stuck the magazine in his pocket and stood up as the door opened and Von Zorn and Quade came in. Quade held one of the Mercurian creatures in his cupped hands.

"Hello there," he said to McColm. "Found out anything?"

"A little," the scientist admitted. "There's something I want to know, though. How'd you manage to get those things from Hotside?"

"Robots and remote control," Quade said. "Keep this under your hat, though. I took a specially insulated space-ship to Mercury and sent out some robots, using a very narrow control beam—and even

then I got plenty of interference from the Sun."

"By the looks of your expense sheet," Von Zorn growled, "you must have had plenty of interference all around."

"It took power, Chief. I was fighting the sun's energy and even at a distance of thirty-six million miles that's no joke. Lucky we've got the best robots in the System and the perfected narrow-beam control."

"That's true," McColm said. "These —what d'you call 'em?"

"Prometheans," Quade supplied. "After Prometheus, who lit his torch from the Sun."

"Good name. That's exactly what these creatures do, you know. They get energy directly from the sun. Those spines"—McColm took the Promethean from Quade's hands and scrutinized it closely—"they look like heavy fur, but they're largely of mineral content. They serve a dual purpose. Tiny muscles activate them so they can function as legs and when the Prometheans move, which isn't very often, they can scurry along like caterpillars. But these spines also develop electric energy on which the creature lives.

"One of the metals we've isolated in the spines is selenium. Now it's obvious that under the conditions of terrific heat and light on hotside, the selenium reacts with some other metal—it might be one of several—to generate a weak electric current. We can do that in the lab, of course. The Prometheans store the electricity, like condensers, using what little they need whenever necessary." McColm's chubby face was alight with interest.

Von Zorn said hesitantly, "You mean —they eat electricity?"

"Don't we all?" Quade asked and the scientist nodded.

"Of course. You eat Solar energy, or you couldn't live. You'll find chloroplasts —tiny globular bodies—in the green leaves of vegetation. They contain chlorophyl. And they store sunlight as chemical energy. Photosynthesis enables a plant to change simple inorganic compounds into the complex molecules which form a great part of our own food. Here's the cycle—the plant uses chlorophyl to transform carbon dioxide and water into carbohydrates, which gives us solar energy in usable form when we eat the green leaf.

"These Prometheans simply take a short cut—which they can do because matter is basically electric. Millikan proved that with his oil-drop experiment. The atomic structure of a Promethean enables it to absorb energy direct without any intermediate stages."

Von Zorn, who had been listening with eyes closed, gave a slight start and opened them.

"How about keeping 'em alive? We're a long way from Mercury."

McColm tut-tutted. "We've solved that one," he answered. "We used a dry cell. The Promethean wrapped itself around the terminals and sucked the juice out of the battery in no time at all. And for a while it was quite active too. It had more energy than it gets in many a long day on Mercury. Figuratively speaking, of course, for it's always day on Hotside. I compute that a Promethean needs one dry cell a week to keep it healthy."

The annunciator buzzed. Simultaneously Ailyn Van entered.

An unusual girl, Ailyn—she was the ultra-modern star of Nine Planets and her fan mail had strained the struts of many a space-ship. Despite the streamlined boniness of her face, she was, as the saying goes, a knockout. Her platinum-tattooed eyes passed over McColm, annihilated Quade and raised Von Zorn's temperature.

"I want a Promethean," she said and that was that.

Von Zorn gulped. "Uh—I don't know, Ailyn. We only have nine of them and the lab boys need them for experiments. What do you want one for anyway?"

"They're so cunning," Ailyn explained. "And I'm having some publicity stills taken tomorrow. It'll be lovely publicity." Spying the Promethean McColm still held she strode over and calmly appropriated the Mercurian, which made no comment save for a

faintly fluorescent sparkle.

"Well!" said Ailyn, pouring the creature from one hand to another and watching the fireworks. "It tingles!"

"Mild electric shock," McColm explained. "Whenever it's moved about it has to adjust itself. This means expenditure of energy—hence the sparkling. It lives on electric energy. You feed it a dry cell once a week."

"How quaint." Ailyn stabbed the unfortunate scientist with a platinum glance and went out, trailing orange and blue sparks. And quite suddenly Quade felt an icy qualm of uneasiness.

HE turned to the others. "I wonder if we were wise in letting that creature out of our hands before we know about it," he said slowly.

McColm shrugged.

"They can't be dangerous. They aren't large enough to hold a strong electric charge."

The annunciator buzzed again. A voice said, "Mr. Von Zorn—Miss Kathleen Gregg to see you. She wants a—one of the Mercurians."

And that was the beginning. The Prometheans were the latest rage of the stars—the newest fad of Hollywood on the Moon. There were nine of the electric creatures to pass around among a hundred stars and featured players, not to mention the wives of the board of directors. Von Zorn helplessly permitted the Prometheans to be taken from him with the one proviso, of course, that they remain on the Moon so Gerry Carlyle might not have a chance to acquire one of them. The price of a Promethean skyrocketed overnight into the thousands with no sellers.

And less than twenty-four hours later the Moon started to go haywire.

Quade and McColm were leaving the offices of Nine Planets with the intention of absorbing solar energy as prepared by the Silver Spacesuit's renowned chef. They got into Quade's surface-car but the automatic starter did not immediately operate. Quade investigated.

"Battery must be dead," he grunted. Getting out he lifted the hood and let out a soft whistle of amazement. Wrapped about the battery terminals like a drowsy cat was one of the Prometheans.

"Just look at that!" Quade said to McColm over his shoulder. "The little devil's deliberately sucked all the juice out of the battery. Wonder who put him there? A corny gag, if you ask me." He slipped on a glove and ungently removed the Promethean, tossing the creature to the street, where it lay sparkling vigorously and continuously. But, more surprising, it was much increased in size over any of the other Mercurians.

"It was hungry," McColm said, "that's all. Or shall we say thirsty? Our little friend here has been tapping a sort of fountain of youth. More electricity at one time than he ever got on Mercury. Naturally the size increased. Doubtless its activity will increase proportionately."

Taking the cue, the Promethean arose, sparkling indignantly, and moved off down the street with precise movements of its under-spines. The dignity of its progress was somewhat impaired by a pronounced vibration. The Promethean wobbled.

Quade and McColm exchanged looks and suddenly grinned. Though the creature bore no resemblance to anything human it somehow managed to convey a perfect impression of an intoxicated reveler veering homeward with alcoholic dignity.

"He can't take it," Quade chuckled. "He's tight!"

"Too much energy," McColm nodded. "He's drunk with energy, more electricity than he's ever had before at one time."

Quade recaptured the Promethean and left the scientist briefly to take his prisoner into the Nine Planets building and turn him over to the labs. When he returned he found McColm waiting with a taxi. They drove to the Silver Spacesuit and found a table near the stage, where hundreds of important acts were striving valiantly to catch the eye of movie mogul and talent scout.

Right now a trio of acrobatic dancers were performing. The girl had form-fitting gravity plates, powered by wires invisible in the tricky lighting and weighed less than a pound, so that her companions could perform seemingly incredible feats of skill and strength. But this was an old stunt, and attracted little attention.

Without warning the lights flickered and dimmed. Simultaneously the girl, who was at the moment shooting rapidly through the air, fell heavily upon an assistant director who was absorbedly eating lobster at a ringside table. There was an immediate confusion of acrobat, assistant director and lobster. The audience enjoyed it and laughed with genial approval.

Then the mirth changed to indignation as the lights went out altogether. There was mild excitement as the early evening crowd milled around aimlessly in the dark.

Wordlessly Quade and McColm ploughed through the mob toward the rear. There, where the power lead-ins passed through the meter box, another of the Prometheans was found coiled around the bared wires. The headwaiter, gripping a flashlight, was staring in wide-eyed amazement at the object and shaking his free hand.

"It—it shocked me," he murmured. "Ouch!"

Quade found a glove in his pocket and with its aid he ripped the rapidly growing Promethean from the wires. The lights flared up again. With the Mercurian under one arm he fled back through the cocktail bar in a short cut to Lunar Boulevard, McColm at his heels.

"If any more of these infernal little devils are loose they may get into the central power house. That'd be plain hell."

And, just then, every light on Hollywood on the Moon except those on vehicles wavered and went out.

"You're a little late, Tony," McColm said. "They're taking the juice from the generator terminals right at this very moment!"

CHAPTER III

Panic on the Moon

QUADE hailed a taxi, leaped for its running-board. He promptly found himself sailing up in an astounding jump, hurtling completely over the surface-car and coming down lightly on the other side.

The cabman thrust his head unwarily through the window to stare at this athletic marvel and dived ungracefully out to crack his head smartly against the paving of Lunar Boulevard.

McColm, guessing what had happened, hastily glided around the taxi and helped the two men to their feet. "The gravity plates below us," he said tonelessly. "They're not working either. More Prometheans sucking away the power."

"You don't tell me," said Quade bitterly, experimenting with a tender ankle. "Take us to Central Power, buddy, and make it fast." As the taxi jerked into motion he murmured, "Thank God there's only nine of these blasted things altogether." He still held the captive Promethean and now, opening a baggage compartment, thrust the creature inside and slammed the panel.

Men and women were pouring from night spots and buildings along Lunar Boulevard. Even late workers on the sets of Nine Planets gave up and joined the tumultuous throng. Surface autocars, with their individual batteries and lights, were small oases in the absolute blackness of interstellar space. Hollywood on the Moon was half frightened and half amused by what it considered something of a gag while a temporary difficulty in the power rooms was repaired.

Through the mob Quade's taxi scooted skilfully, heading for the entrance to the lunar caverns, where gigantic generators produced the electric power that was the very lifeblood of the Moon. Arriving at the skyscraper that masked the

mighty machines beneath, Quade and McColm piled out.

"Turn around so your headlights shine down the entrance ramp," Quade commanded, thrusting a bill in the driver's hand. Without waiting for an answer he followed McColm down into gloom.

The elevator bank was motionless and dark but not silent. From within two of the shafts floated up a terrific banging and shouting from carloads of passengers trapped between floors and suspended precariously by emergency brakes.

Quade ran to the stairs and led the way down the descending spiral. Two minutes of clattering reckless flight in total darkness brought the men to the power room level. A flickering red glow guided them to the central cavern, a vast natural chasm filled with the dynamos, generators, and huge machines that kept the Moon alive. Several piles of cotton waste were burning here and there.

Normally everything in the power house is more or less automatic and few attendants are necessary. At the moment one of these, a burly man with a harassed expression, was striving frantically to pry loose one of the Prometheans from the terminals of a generator.

Since the Mercurian was more than ten feet in diameter and spread over most of the generator's surface, the burly man's efforts were not notably successful. Indeed, his attempt to pry the creature loose with a crowbar seemed merely a gesture.

As Quade ran forward the whole cavern seemed to explode in a blinding blaze of flame. There was a deafening thunderclap and an invisible hand seemed to lift Quade and McColm and smash them back. The attendant vanished. A spouting roaring fountain of sparkling pinwheels showered over the power room's plastic floor.

Presently the world stopped reeling and Quade clambered unsteadily to his feet. The electric lights were again burning. Blue mercury and pinkish helium globes glowed here and there among the others. With numbed surprise Quade noticed that the Prometheans no longer clung to the naked power lines. But all over the room were scattered dozens of small Prometheans, glittering madly as they poured in a drunken rout toward the generators. A score of them reached the bared terminals and the lights went out again.

The cotton waste still burned. McColm arose, his round face grim.

"Did you see that?" he breathed. "They've reproduced! When they get so much electricity stored up in them they can afford to share it with offspring, they divide by multiple fission."

Quade was kneeling beside the attendant's motionless body.

"Yeah—he's still alive. That's a miracle. McColm!" He stood up, lips tightening grimly. "This is pretty serious. We've got to stop those things right away!"

THE two men marched into the sparkling sea, kicking a path toward the generators. Quade, with his gloved hand, began pulling the Prometheans from the terminals. McColm tried to help, but was promptly knocked sprawling by a savage electric shock from one of the visibly growing Prometheans.

"Never mind," Quade said swiftly. "I can pull 'em off faster than they can climb back on. Find a bag or something to put them in."

But it was too late. The Prometheans were, so to speak, in their cups, and large enough and active enough to cause Quade trouble. In some obscure fashion they realized that Quade was an enemy, trying to prevent them from reaching the intoxicating electric current. So they advanced with drunken persistence and surrounded him.

An electric shock is not calculated to induce calm. Quade yelped and fell down, his legs momentarily paralyzed. The Prometheans sparkled with a vaguely triumphant air and advanced.

McColm rushed in, kicking vigorously, and dragged Quade to safety.

"This'll never do," the scientist

gasped. "There's no bag to hold them in and they'd burn their way out anyhow. We've got to get weapons."

Quade stood up, tottering slightly.

"Where? The only weapons are in the prop department on the lot. This is a city, not a fortress. The police have gas guns and bullets but the Prometheans don't breathe and are too homogeneous to be harmed by explosives. They haven't any vital parts. They'd just be blown apart and we'd have a lot of new Prometheans to fight."

"Heat rays?" McColm said. "No—they'd absorb the energy. Wait! We might short-circuit them. They must have a positive and negative end or they'd never be able to absorb the electricity as they do. If we could place an iron bar so as to touch each end—"

"Walking over a metal plate would act the same way," Quade said, and pointed. One of the Prometheans was crawling idly over the iron housing of turbine, completely unconcerned.

McColm blinked. "Well—we might douse them with water and short them that way."

Quade went to a drinking fountain and bent over it. Usually this broke a light-beam impinging on a photo-electric cell and sent water spouting up. Nothing happened. The lights were out, of course.

Quade found a manually-operated fountain but this too was useless.

"The pumps aren't working," he grunted. "They take power too, you know."

When the architects had designed the fantastic beauty and utility of Hollywood on the Moon they had decided against placing any unsightly water tanks above ground for gravity flow water. Instead they had placed the storage tanks in the Moon's caverns, with powerful pumps to direct an upward flow.

"Well," McColm said desperately, "let's try clubs. Maybe we can beat them to a pulp." With this ferocious intention he found a crowbar for himself and one for Quade and turned back to the Prometheans. These creatures, no longer molested, had returned to sucking juice from generators and were having an uproarious time in their strange manner, dropping occasionally to the floor to reel about with dizzy delight, sparkling in all colors of the spectrum.

One of them wobbled toward Quade and made a playful dash at his ankles. The crowbar crashed down. But the Promethean seemed to ooze out from under the blow, squirting away to carom against one of its colleagues some distance away. The two Mercurians conferred for a moment and then staggered off to a generator, sparkling mockingly at the discomfited Quake.

It was impossible to kill the creatures thus. And before long another terrific explosion rocked the power room and a second Promethean burst flaming into a score of smaller ones. Quade seized McColm's arm and drew him back to the comparative safety of the stairs.

"We're wasting our time," he panted. "Look at those devils crawling toward us to give us the works. We'll have to have help, that's all there is to it." He paused to lift the unconscious attendant to his shoulder and followed McColm up the stairs. A few Prometheans followed but in their condition the puzzle of climbing steps was difficult if not insurmountable and presently they all rolled down again.

The taxi-driver was still waiting, listening to the radio in his car.

"Nine Planets' office, quick!" snapped Quade.

"You won't find nobody there," said the driver. "Von Zorn's ordered everybody to evacuate the Moon until the Mercurian menace is under control."

"Mercurian menace," Quade groaned. "That baboon would be melodramatic on his deathbed. All right—the spaceport, then." As the taxi started he called, "How long were we down below?"

"Pretty long. Seemed like a century. A half hour, I guess. Von Zorn's speech kicked open the emergency circuit, so everybody on the Moon must have listened in."

"Radio?" McColm rasped. "Where'd they get the power?"

"Emergency batteries, of course," Quade said.

They sped through a stricken city. The panic was on! All Hollywood on the Moon was fleeing for the space-ships and safety.

OCCASIONALLY a wild-eyed man sprang into the taxi's path to flag a ride, but the expert driver tooled his car around without losing speed. Three times they heard distant explosions and saw momentary flares of sparks against the backdrop of starry darkness. Prometheans were multiplying.

"It wouldn't be so bad if they hadn't all managed to get loose at the same time," Quade muttered. "It was so darned quick. They had control before we knew there was any danger."

With decreased gravity pedestrians bounced about like rubber balls. Luckily the street was level but whenever the car hit a bump it rose for some distance with the motor roaring and the wheels spinning madly. The spaceport was a shrieking bedlam of milling humanity in the fitful light of automobile lamps and improvised flares. Quade smiled grimly as he watched some of Nine Planets' ruggedest he-men battling past frenzied women to get passage on the ships.

Occasionally Prometheans scurried about, kicked at and abused almost pathetic in their apparent lonely helplessness. But the stars, who had not long past displayed them proudly at social events, now screamed and ran at the very sight of a Mercurian.

Presently the outgoing ship was jammed full of humanity and the air-lock closed. Attendants shoved the crowd back to safety and signaled the okay to take off.

Nothing happened. Minutes passed. A chill of apprehension passed over the crowd. Then the lock swung ponderously open and the ship's commander stood in the opening. He held in both hands a swollen, sparkling Promethean.

"All the juice is gone from the storage batteries," he called. "Can't generate a spark in the rocket chambers. And it'll take hours to build up enough current to energize the gravity plates."

The same condition was found to exist on four other space-ships. That left only a few, not nearly enough to evacuate a quarter of the Moon's inhabitants. But these took off and sped toward Earth, sending frantic radio signals for aid. The Moon's emergency radio equipment had gone dead when a Promethean found it, and signals broadcast from New York and London to the relay ships beyond the Heaviside layer brought little hope.

All spacecraft within a wide radius had been ordered to converge on the Moon at top speed. But the distances were those of interplanetary space, and it would take time for the nearest vessel to arrive. And time was important, terribly so!

Without power the air rectifiers were failing, the gigantic heating plates and coils died and the beams holding down the artificial atmosphere were useless. In three or four hours the Moon would be literally a dead world!

The air was cold, rapidly getting colder. A knifing wind blew coldly from the Great Rim—a wind on the Moon where none had blown for illimitable eons! Already the trapped atmosphere was moving out from the gigantic crater that had held Hollywood on the Moon. With neither gravity nor force beams to hold it the air was seeping over the Rim, diffusing to all parts of the surface and dissipating in the vacuum of space.

Panic came swiftly to those caught in the death-trap. The most glamorous and beautiful city in the System now—and in four hours, it would be a morgue!

CHAPTER IV

The Ark Arrives

GERRY CARLYLE paced the control room of the Ark and watched her chief pilot, Michaels, as he sat with lined strong face intent on the instru-

ments. The girl's stubborn chin was set, her silken blond hair tousled.

"Pep it up, Michaels, can't you?" she burst out. "It's been an hour or more since the last signal came in from the Moon."

"The refugee ships are still sending messages," he grunted.

"What of it? For all we know the Moon may be dead right now. I wish I'd radioed Von Zorn or Quade when I first got the dope on that Martian spore!"

"What was that?"

Gerry halted and frowned at the pilot. "I ran across it long ago in a Martian volcanic area. It's microscopic but it resembles these—these Prometheans. It absorbed energy directly from the volcanic activity. I saw them grow, Michaels, and reproduce. It's no wonder the signals from the Moon have stopped!"

The girl hurried away as a thought struck her. The radio transmitter was in a nearby cabin, and quickly she adjusted it for sending. Not for the first time she wished her lieutenant and fiancé, Tommy Strike, were along but Strike had gone fishing for mariloca in the Martian canali, and she couldn't spare the time to pick him up.

When Gerry, after studying the notebook sent her by stratosphere from the London Zoo, had noticed the possible danger, she had immediately manned the Ark with a skeleton crew and pointed its nose toward the Moon. She had thought of televising Von Zorn or Quade and warning them but had hesitated.

For that the Prometheans actually were dangerous was only a theory on Gerry's part and the possibility of Von Zorn's ridiculing her wasn't pleasant. Moreover the President of Nine Planets would never believe the girl, would think it only a trick on her part to gain possession of the Mercurians.

So Gerry went off to investigate firsthand. And, almost at her destination, she received the first warning broadcast from Von Zorn. After that events moved thick and fast.

Gerry kicked over a switch and leaned close to the transmitter. "Calling Hollywood on the Moon! Calling Hollywood on the Moon!"

No answer—but Gerry had expected none. She went on, "Message for Anthony Quade! Carlyle of the Ark calling Anthony Quade of Nine Planets Films! Please relay this message to Quade. Message follows. Quote. Meet me at the Central Spaceport in twenty minutes. Bring Prometheans for experimental purposes. Signed, Gerry Carlyle. Unquote."

She repeated the message several times, then went back to pace the control room. It seemed an eternity before Michaels lowered the ship on a cleared space, faintly illuminated by car headlights.

He pointed through a porthole. "Look at that mob! You're not going out there, Miss Carlyle?"

"I am," Gerry said grimly, buckling on a gun-belt. "So are you." She handed a rifle to the pilot and led the way.

As the spaceport swung open a surging flood of humanity, terrified, shouting, screaming, pressed forward. "Let us in! Let us in!"

Gerry stepped back involuntarily. Then her stuborn chin jutted. She drew the gun, waved it menacingly. Her voice cracked out, cold and incisive.

"Get back—all of you!"

Michaels, behind her, lifted the rifle. The mob hesitated and a man shoved his way through, a Promethean under either arm. Gerry recognized him. *"Quade! Here!"* she cried.

He broke into a stumbling run. The crowd broke and surged forward. Quade reached the spaceport a few steps before the first of the mob. Gerry hauled him into the ship, planted a capable fist on the nose of a man trying to scramble aboard and dodged inside. Michaels slammed the port, locked it.

"Lift the ship," Gerry snapped. The pilot hurried to obey. Quade stood silent, looking embarrassed. His face was grimy and a long cut ran from forehead to chin where a flying splinter of glass had grazed him.

"In here," Gerry said, and led the way to her laboratory. Once there she

stood arms akimbo and glared at Quade.

His attempt to smile was not notably successful. "Okay," he said. "Go ahead, pour it on."

"Not at all," Gerry observed sweetly. "I've run into incompetence before."

QUADE made a hopeless gesture. "I've got a comet by the tail. Confound it, Miss Carlyle, I'm responsible for all this. So far nobody's been seriously injured but in a few more hours the whole Moon will be dead. Unless—"

"Now you listen to me," Gerry said, the stubborn set of her chin presaging trouble. "I haven't got the resources of Nine Planets Films behind me. When I want a new monster I have to go out and fight for it. My men have to risk death every time they follow me. That takes something, Tony Quade. Anybody with a few billion dollars can use robots to collect specimens—"

The man winced. "Oh! You guessed that!"

"Sure. Robots are the backbone of Nine Planets, aren't they? Give me the animated fireworks." She snatched a Promethean and reached for a magnifying lens. "No, I haven't your resources. I can't pick the finest brains in the System when I want to know something. But my knowledge is practical, Quade, and I got it from knocking around the planets for years."

"We've shut off all the power," Quade said hopelessly. "McColm—he's the head of the labs—is superintending that. But once we turn it on again the Prometheans will suck the electricity. There must be hundreds of them now."

"This creature has a positive and a negative pole," Gerry Carlyle told him. "And there's a device to seal over the poles when they move around. That's natural, since they came from a highly metallic world."

"Yeah," Quade said. "That's why we couldn't short-circuit them."

Suddenly Gerry smiled but not pleasantly. "I can short-circuit them," she observed. "I can clean up the Moon for you in a jiffy."

"You mean that?"

"Yes. I can destroy every Promethean here—except one. I want one left alive."

Quade didn't answer. Gerry took a paper from her pocket and laid it on a table. "Here's a pen," she said. "I can write contracts too."

"What's the squeeze?"

The girl's eyes blazed dangerously. "The squeeze—as you inelegantly term it—is simply my fee for saving the Moon. I want one surviving Promethean for the London Zoo. And I want your assurance that you won't import any more from Mercury."

"But Von Zorn—"

Gerry said angrily, "I could make this a lot harder for you if I wanted to. I'll give you sixty seconds to sign that agreement."

Quade scowled but signed. He dropped the pen and said grimly, "What now?"

"I'll need a large cleared space. Where—"

"The Plaza?"

"Okay. Show Michaels the way."

Without a word Quade went out. Presently the Ark grounded. Gerry was at a porthole. Looking out over the broad parklike expanse she nodded with satisfaction.

"Plenty of room. That'll help."

Gerry had an idea of how she could destroy the Mercurians. It was simple enough. More than once scientists on the Moon had already had a similar inspiration but unfortunately, power was needed to carry it out. And the only power available was in Gerry's Ark. It would be hours before any other ship arrived.

The girl locked the Prometheans in one of the numerous cages around the room, smilingly patted the contract in her pocket and set to work.

"The Prometheans must be highly sensitive to electricity," she said to Quade, who had wandered in, "or to any source of power. They'll be coming around here pretty soon."

"What's your plan?" Quade asked.

"I'm a trapper by trade, so I'm using a trap. The most primitive of weapons. As soon as I can set up a portable power plant—"

This didn't take long for Gerry had capable assistants. Quade, at the girl's suggestion, went outside the ship and went through the gathering crowd, organizing an emergency police staff. A large area was roped off and the streets leading into the Plaza were cleared. And now in the distance the first of the Prometheans were seen arriving in a blaze of sparkling glory.

Quade, who was in conference with some of the studio staff, returned to inform Gerry of their arrival. She brushed a strand of blond hair from her eyes and murmured absently, "Not ready yet. Keep 'em away."

She didn't explain how but nevertheless Quade went out and sent out a hurry call for a long wooden-handled shovel. Already the Prometheans were arriving in force. There was now no need for the ropes to keep the crowd back. The mob shrank away terrified from the blazing beauty of the creatures.

Faster they came and faster. Men and women sought safety in flight. Only a few of the hardier men—many of them belonging to Quade's personal staff, hand-picked and efficient—remained. But even these could not withstand the onslaught for long.

Slowly Quade's men were forced back to the Ark's port. Under the impact of violent electric shocks gasping curses and groans went up. The space-ship was the center of a flaming whirling incandescent glare of rainbow light. Flame-red, sun-yellow, eerie blue and green and violet, it was a fantastic spectacle of terrifying beauty. Beauty that meant death!

CHAPTER V

Short Circuit

GERRY opened the port and said, "You can come in now." She looked cool as a cucumber. Quade angrily suspected that she had spent a few minutes renewing her lipstick and touching up her hair while he and his men struggled against the Mercurians.

"Thanks a lot," he grunted, following the others into the ship. A Promethean wobbled in after him but a sharp kick disillusioned the creature and sent it scooting into the night. Quade slammed the port.

"Come on," Gerry said. "We're all ready." She led him down a sloping passage and opened a door. Quade saw a large circular room, carpeted apparently with grass.

"This compartment has a sliding floor," she said. "Sometimes we set the Ark down over a monster, slide the floor back into position, replace the outer insulation and then we've got him safely."

Quade was eyeing a portable power plant which had been set up near by. An iron plate lay flat on the ground and Gerry pointed at this casually.

"The Prometheans have to unseal their poles when they feel," she explained. "See that grounded wire? It's just a device for short circuiting. I'll show you—" She called to Michaels and presently he appeared, bearing one of the creatures. Gerry took the Promethean and dropped him to the ground, where he remained still a moment.

Then he moved directly toward the power plant. His round body slid onto the iron plate. He reached up toward a bare, dangling wire—*puff!*

"He's dead," Gerry observed. "Caught with his seals open. His condenser charge is gone just like that."

The Promethean lay flabby and motionless, all the gay fireworks gone, limp and obviously dead. Gerry kicked the creature off the plate. "Organize a bucket squad," she called to Michaels. "And open the wall—two-foot radius."

Silently a gap widened in the space-ship's hull. Rainbow sparklings brightened as the Prometheans surged forward. Quade suddenly noticed that Gerry wore high rubber boots, that the girl was eyeing him with a certain malicious amusement. With firmly set lips he took the pail she handed him and waited.

The Mercurians poured in through the gap. But only a few at a time could enter and they sped in an unerring narrow stream toward the power plant. And like the first Promethean they reached up toward the dangling wire, and—*puff!*

"Scoop 'em up," Gerry commanded tartly. "We need elbow room here."

Quade obeyed. Along the sloping corridor men stood at intervals, a bucket brigade that passed along empty pails as Quade sent up Promethean-filled ones. There were more of them than he had thought. Prsently his arms began to ache and the glances he sent toward Gerry, who was lounging negligently against the wall, were expressive.

"Keep your temper," she advised. "You're not out of the soup yet."

Since this was true, Quade didn't answer but bent to his task with renewed vigor. There must have been five or six hundred of the creatures from Mercury. But at last they were killed—all but a few too large to enter the narrow opening.

At Gerry's command Michaels enlarged the gap so the rest of the Prometheans could surge in. Quade made a frantic bound for safety but the girl was ahead of him and blocked the passage. "Don't just stand there!" he snapped. "One of those things is heading right for me!"

"So sorry," Gerry said and with a dextrous movement managed to propel Quade back, where he collided with a fat Promethean and was hurled to the ground by a violent electric shock. Muttering he rose and watched the last of the creatures die. Gerry's cool voice came from the passage. "That's all. There aren't any more."

SIMULTANEOUSLY lights flared up all over Hollywood on the Moon. Michaels had sent out a reassuring message and the power once more went racing through a maze of cables and wires. The jet starry sky faded and paled as the lighting system went into action. The air rectifiers plunged into frantic operation, the force beams flared out, the heating plates and coils glowed red and then white.

Quade followed Gerry into the control room. The girl sank down into a chair and lit a cigarette. "Well?" she inquired. "What's keeping you?"

Quade flushed. "Not a thing," he said. "Except—I want to say thanks."

"Don't thank me. I've got my fee," Gerry's sly sideward glance took in Quade's somewhat flushed face. "There's one Promethean left and he's tucked away safely in my lab."

"You're welcome to him. Only—" Quade's voice became suddenly earnest. "Miss Carlyle, do you realize what a picture that would make? Gerry Carlyle in *The Energy-Eaters!* Can't you see that billing placarded all over the System? We could make it easily. One word from you and I'll have our best scriptwriters grinding out a story. Have a special premier at Froman's Mercurian Theatre—it'd clean up! You'd have enough dough to build a dozen Arks. And we could shoot the pic in three weeks with double exposures and robots—"

"Robots!" Gerry bounced up, crushed out the cigarette viciously. But Quade failed to heed the warning signals.

"Sure! We can fake 'em easily."

"Mr. Quade," Gerry interrupted sternly. "First of all I should like you to understand that I am not a fake. The name Gerry Carlyle means the real thing. I have never let down my public and I do not intend to begin now. And once and for all I will not make a fool of myself by appearing in one of your corny pictures!"

Quade stared, his mouth open. "Did you say—corny?" he asked unbelievingly.

"Yes!"

"*My* pictures?"

"That ends it," Quade snapped. "Nine Planets will keep its agreement with you. Take your Promethean. Though I doubt if it will survive your company for long." With that he turned and marched out of the Ark, leaving Gerry chuckling happily to herself.

However, if she had seen the object

Quade took out of his pocket with such care a few moments later she might not have been so pleased.

Twenty-four hours later Gerry Carlyle and Tommy Strike strolled along Broadway. Strike had just treated to hot-dogs and with the corner of his handkerchief wiped mustard from Gerry's nose. "Thanks," she said. "But don't interrupt. Tommy, do you know what this means to us?"

"What?"

"A fortune! Customers will come like flies—that Promethean will draw millions of 'em to the Zoo. And they'll pay too."

"Well," Strike said slowly, "I suppose so. Only I'm not sure you were right in turning down that guy Quade's offer. You'd be a knockout in pictures."

Gerry snapped, "I don't wish to hear any more about that. You know very well that when I make up my mind to something it's settled." She paused. "Tommy! You're not listening."

Strike was staring, eyes and mouth wide open, at a blazing neon-and-mercury marquee above the entrance to a Broadway theater.

"Gerry—look at *that!*" he gasped.

"What?" Gerry demanded. "I don't—*oh!*"

Strike read the sign aloud. "Scoop! Lunar disaster! See Gerry Carlyle capture the Energy-Eaters!"

"Get tickets," the girl said weakly.

Inside the theater they had not long to wait. Presently the feature ended and the special newsreel came on. And it was all there—Gerry's arrival in the Ark, the exciting scenes at the Plaza filmed in eerie ultra-violet, even the final destruction of the Prometheans inside the space-ship.

"Just look at me!" Gerry whispered fiercely to Strike. "My hair's a mess!"

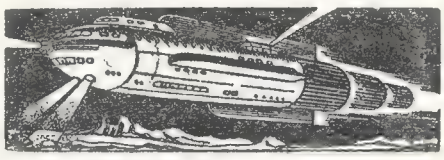
"You look all right to me," Strike chuckled. "Wonder how he got those shots without your seeing the camera?"

"He had one inside his shirt—one of the tiny automatic cameras with sensitized wire film. He was double-crossing me all along. The worst of it is I can't sue Nine Planets. Newsreel stuff is common property. Come on—let's get out of here."

They had to fight their way through the crowded lobby. As they emerged Gerry paused to eye two long queues that stretched far along Broadway. The rush was beginning. Already radios and advertising gyroplanes were blaring, "See Gerry Carlyle capture the Energy-Eaters! A Nine Planets Film!"

Strike couldn't resist rubbing it in. "So when you make up your mind to something it's settled, eh?" he said.

Gerry looked at him a long moment. Then a half-smile hovered on her lips as she looked around at the increasing crowd. "Well," she said, "anyhow—I'm packing them in!"



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(Continued from page 8)

sents no problems which cannot be met and unraveled by application of that simplest and most effective of all basic maxims of behavior—the Golden Rule. You might even try it sometime!

OUR NEXT ISSUE

COME November and we're all taking off on an interstellar treasure hunt—in the company of that irrepressible Irish adventurer, Paddy Blackthorne, and Fay Bursill, the fiery little pocket Venus who rescues him, abducts him, mothers him, brushes him off and generally behaves in a manner calculated to drive any self-respecting futureworld Irishman out of his mind.

The story, a gorgeous space-opera novel by Jack Vance, is THE FIVE GOLD BANDS and it represents definitely one of the high-spots of SS if not of stf for the year 1950. It is a tale of magnificent purpose, of constant peril, of high humor and romance, of brilliant pseudo-science and glimpses of other worlds. It is, in short, just about everything the genus space-opera can hope to attain.

Paddy, born to rebellion, is out to break single-handed the Langtry space-drive monopoly, which is holding the galaxy in thrall.

For although the inventor of the drive, the original Langtry, was an Earthman and intended his invention to serve Earthmen, he left his discovery to his five sons, giving each of them a portion of the secret, and the sons each took another world to himself.

Earth and the rest of the planets got lost in the shuffle.

When Paddy opens operations against the monopoly the thrall has held for long centuries, always with five of the Langtry descendants cracking the whip by careful underapportionment of the Langtry drive to the various inhabited worlds. He has no particular idea of what he wants to do with the secret when, as and if he manages to get it—he merely wants to bust things wide open.

Of course he gets caught—and is transported for sentence to the semi-artificial asteroid upon which the representative of the Langtry descendents are to hold their annual conference. There, in a brilliant burst of desperation ingenuity, he breaks loose with dire results to his captors, flees to a pirate system to hide out.

But Langtry agents are hot on his trail and only through the agency of the girl, Fay, is he able to get clear with a whole hide. Fay, it develops is working for Earth and the galaxy and reluctantly Paddy joins forces with her.

For he has procured, at the conference, the code map which reveals where the various portions of the Langtry-drive secret are hidden.

From here on in the hunt and pursuit grow ever hotter and more furious—as does the growing attraction between Paddy and Fay—leading up to a crashing finale which contains sufficient surprises to pack a half dozen stories of this length.

With his recent NEW BODIES FOR OLD in our companion magazine, TWS, Jack Vance has stepped well up into the forefront of science fiction authors. And THE FIVE GOLD BANDS is going to put him even further in the van. For this is space-opera as it should be written—with real people and utterly credible aliens rather than the mere two-legged plot gadgets and BEMs with which all too many such tales have been filled in the past.

And Captain Future will be with us again in novelet form in PARDON MY IRON NERVES by Edmond Hamilton, the maestro of the Futuremen. Did we say Captain Future? Our apologies, Grag, for this is your story. The robot with the magnificent built-in ego is pretty much on his own this time and the tale is told through his electronic eyes.

Grag, contrary to general beliefs about robots, is a highly sensitive soul—and in this instance, while endeavoring to discover why the mining machines on a Plutonian moon have ceased to deliver as catalogued, he discovers himself in definite need of psychoanalysis.

The results are, to put it mildly, catastrophic. They are also ingenious, exciting and funny. For Grag is one of the greatest involuntary comedians known to stf. And when he tells the story . . .

Well, read it and laugh!

There will be a full quota of other novelets and short stories to make the November SS not only a large but a quality package—in short, well up to the level to

which its readers have become accustomed in recent years.

BEFORE we embark on the bi-monthly slugging match with you-all, dear readers, we wish to issue a blanket admission of an unpardonable boner or "skull" in the May TEV. We really knew all along that it was Jack Haley who played the Tin Woodman in the MGM movie version of Frank Baum's *The Wizard of Oz*, while Ray Bolger played the Scarecrow. Yes, and Bert Lahr played the Cowardly Lion and Margaret Hamilton the Witch and Frank Morgan the Wizard and, of course, Judy Garland was Dorothy. All we can say is our proof-readers should have caught it (buck-pass). Too many of you noticed the bloomer.

Incidentally the May issue drew more letters than any previous issue of SS within our ken. We don't know whether John D. MacDonald's fine *Wine of the Dreamers* caused the epistolary turnout or whether it's just another manifestation of the evergrowing interest in stf. But anyway, thanks. Now for the postcard patsies before really getting down to work. First—

BROWN OCTOBER DREAMS
by William Vissaris

Dear Editor: I quaffed MacDonald's WINE OF THE DREAMERS—say, how long has this been going on? Fill 'em up again! Not bad for a beginner on the thesis of dreams.

Dreams are nothing but intoxicants whether word-intoxicant, idea-intoxicant of, as in the main, reaction-intoxicant and whoever sips of this brew will end up with a hangover that is permanent. As a bona fide Ph. D. (Philosopher of Dreams) I can authoritatively state this life-dream must be drunk to its dregs, which thereby eliminates any after-effects. —133 West 48th Street, New York 29, N. Y.

Oh, well—"laugh, lads, and quaff, lads," and so on. . . . We know what you mean though we tend to shy away from them dregs.

FANPLEA
by T. R. Daniel

Dear Editor:: As a long standing reader and fan of SS and TWS I wonder if I could ask you to insert the following in one of your reader columns?

Fans who are living in Southwest Washington are very cordially invited to join a new group forming at present in Aberdeen. If enough can get together from surrounding communities many pleasant evenings are anticipated. We have a few very interesting members right now. If you are interested get in touch with us.—Brown Elmores, Aberdeen, Washington.

Gladly and we wish you even more pleasant evenings than you fondly anticipate, Tom. Have a nice club for yourself.

SENSATIONAL DRIFT
by Rodney Palmer

Dear Editor: Accidentally reading a movie critic's column t'other day came across the comment: (and I do not quote literally) "Advertising in the film business has for years been too sensational—every picture terrific, etc. Now movies are really better than ever but nobody believes the hucksters! That is to say, it looks as if the moguls of Hollywood have cried wolf too often. . ."

As an aside I'm reminded that everybody's asking—what's killing movie attendance? Answer—crime in the cities has increased at such a pace that folks unable to taxi home make it a point not to be out after dark. End of aside.

As for what I was getting at in the first place, it seems to me Science Fiction may be drifting the same way as the movies—and I mean particularly sf magazines. Reprint books are, I suppose, doing reasonably well in the book market. But I've heard somewhere book readers are a special lot.

The supreme authority, the omnipotent they (the source from which astounding facts of great import come) say you can sell a book-buyer a book that's bad faster than you can sell said same buyer a magazine that's almost worth reading. But onward. . . .

To my world-weary gaze it looks like things are swinging back. Reprint magazines are coloring up the stands and modern stories are getting prosaic in slant. I imagine it'll turn out to be the same very sad story—that human inability to recognize defeat, that inability I should say in clarification to face the fact that sf has reached its prime and is waning.

But out of what was once science-fiction is at this very moment springing the sport, the mutation of the future. Ray Bradbury must certainly be considered the forefather of a new generation of writers. Science-fiction, my friends, has fostered individuality in letters. Little tentative steps it all had been at first. And now Ray Bradbury, Margaret St. Clair. . . .

And so come the reprints, because persons raised on true science-fiction want still to read it, are wistful about it and wish that it would not die. But the science-fiction we knew was no more than the writers who made it—who somehow managed to blend clay and iron, who were able to draw the meaning of what we call our age of steel, who found a brotherhood between man and his machine.

I would suggest this for TEV—actually a bulky letter-column can't make a strong one. There is a drastic definite need for some modifying process—a selection of letters based primarily on the courage to complain, wrong or right.

Truly it asserts itself as a pedestal-rocking fact—if current letters are at all representative of the reading breed of science-fiction fans today, then STARTLING is drawing to its pages an uninteresting audience as far as expression is concerned. Do I have to be so literate as to comment that there are exceptions? You know who they are as well as I do.

No doubt about it, though. Science fiction in its present nebulous condition is in a terrible tizzy and I'm convinced everybody's wrong about its really booming. I think it's dead.—226 West 60th Street, Chicago 21, Illinois.

There's a nice opening note—killing us off before we're well under way. Seriously, we don't quite get the sequitur (connection to you) between your opening paragraphs about what's wrong with the movies and crime and all—and your bleat anent the current trends in stf.

Perhaps the type of stf you knew and liked best *is* in a moribund condition—if so, after recent and extensive review in the course of assembling worth-while material from the "good old days" for our new companion magazines, FANTASTIC STORY QUARTERLY and WONDER STORY ANNUAL, we can only say that it is on the whole a good thing.

What is this mating between man and his gadgets whose demise you would appear to mourn? Man's only mating can be with himself, with his fellow humans and with whatever creatures and environments he finds himself in. The machine is merely a substitute for the slave—and from a psy-

chological point of view a whole lot less interesting.

The best of the old "classics"—written by such eminences as Richard Vaughn, Fletcher Pratt, D. D. Sharp and others—have sound characterization and possess solid merit. As for the others—too many of them are primitives rather than classics, cartoons with descriptions instead of drawings, frenetic and generally motiveless action as a substitute for thoughtful development of personality in conflict with alien personality or environment.

On the whole, Rodney, much of the old-time stf was never really alive—for even the semi-adult mind. As for bulk too often replacing interest in the letter columns, maybe—although the constant carping you seem to seek can get mighty tiresome too. But in general we'll take the tizzy to your choice.

MAYBE WINOS WOULD
by Richard R. Smith

Dear Editor: WINE OF THE DREAMERS was great. In fact, its just about the best MacDonald story I've ever read. CHILDREN OF THE SUN seemed a little juvenile for some reason. Don't ask me why—I don't know. The writing was good enough. It might have been the plot. The plot was simple and the action was simple.

Wot does Ave atque vale mean? Which reminds me: In the Oct. '49 TWS, page 151, top of left-hand column. I forgot to tell you: My dear sir, you have a marvelous sense of humor. It was funny.

Glad you gave up looking for the stf character. Such a person might be impossible to produce. Look at the majority of stf stories (force yourself). The main characters are either killed, maimed, married, etc., during the story. And that means—(you get the point don't you?) In fact, I think the majority of readers enjoy a story because they know they're going to meet new characters and new situations and so forth.

I'd like to argue a point with you. In one of my recent scribblings, I predicted stf movies. And you mentioned WAR OF THE WORLDS, SHAPE OF THINGS TO COME and so forth. But these, I think you will agree, were freaks. What I meant was stf movies with plots like stf stories of present-day. WINE OF THE DREAMERS in the current lsh might be a perfect example.

If the film industry had the technical ability to put such a story into movie form, would the public see it, buy it? That's what I meant. If WINE OF THE DREAMERS were put into movie form, the general public couldn't grasp the idea of another civilization on another planet or super dream-machines or the wandering egos, etc. The general public of today is an unimaginative lot.

From studying the people I've met I've concluded (outside of stf fans, this is) they generally aren't interested in the fantastic—associate anything fantastic, impossible or unbelievable with fairy tales and therefore too childish to even think about. In short, the people of the immediate present and the immediate past are stuck on realism.

This new generation is going to be the science-fiction reading generation. They're being raised in a time of looking forward to the impossible becoming possible. Kids of today are hearing about flying saucers, space-ships, other worlds and things that aren't there. In short, the next generation will be ready for science-fiction movies. They will be the imaginative generation—the generation that won't be afraid to think about the fantastic—will accept unbelievable or impossible backgrounds in a fictional story. I suppose I haven't made the idea too clear but that's the gist of it.—8 East 44th Street, Wilmington, Delaware.

Ave atque vale means hail and farewell if you must know. *Pax vobiscum.*

We were consulted some months ago as to movie possibilities in certain recent John D. MacDonald stories—by his agent, who is also a friend of ours. We had the same reaction you did in the matter of WINE OF THE DREAMERS and suggested his JOURNEY FOR SEVEN (TWS, April, 1950) as a much better bet. So far nothing seems to have come of it but we're keeping them crossed.

It is our hunch that the current cycle is swinging back from realism toward the romantic. This is an old pendulum process and the reverse move is usually well begun before the opposite peak is reached. Thus Dreiser, Sherwood Anderson and the American realistic titans of literature were doing their big jobs even while Richard Harding Davis, George Barr McCutcheon and other romantics were sweeping the field.

Today, while the Hemingways, Mailers, Irwin Shaws and others are still pulling down the large royalties, we have a hunch the Bradburys, et al. are very much on the way in. Actually, as the historical novel's continuing popularity reveals, we have both sorts of fiction always with us. It's merely a matter of which is enjoying the sun of popular favor.

Thanks for the reference to our alleged sense of humor but on looking up the issue, page and column indicated we don't think it was very funny.

QUANTITATIVE MATURITY
by Les & Es Cole

Dear Anon: Did we say we liked TEV? Pure understatement! For now we've two mighty antagonists with whom to lock horns. Looks like we've really got something going with Poul Anderson's remarks on biopolitics. This will probably be a longie, old dear, so bear with us.

But first to the "soft underbelly"—that's you! Funny, but recently with some of our friends we discussed the same point you made. Just about all we believe in is to hurt people as little as possible, laugh as much as possible, experience as much as possible, and raise your kids the way you believe to be right. We find ourselves nodding much agreement with you about the statement ". . . with as little hindrance to others as possible."

Tsk, tsk—you put your foot into it again keedo. The senior author saw "The Wizard of Oz" seven times in 1939—he had a crush on Judy Garland—and while we don't deny Ray Bolger is mighty, we do deny that he played the part of the Tin Woodman. That was Jack Haley. Bolger played the Scarecrow.

Incidentally, we could tell you how to "handle decently a story-rating department."

So to Operation Retort: the attack on Festung Anderson. What we set up, Poul, was a loose collection of ideas under the label of biopolitics." While we've plenty of typology, our control data are completely lacking, so you can't call it a science or even a philosophy. And we hasten to explain we did not mean it as a "system." We ain't lookin' for a universal panacea. What we were trying to do was lure people like you into an exchange of ideas. We're grateful for your letter.

Durn it, you spotted the point we tried to gloss over; i.e., the tie-in of the "death trauma" to racial immaturity. We purposely didn't explain it because, quite frankly, we're afraid to say in print the things we'd have had to. (We've lost more friends that way!) But we do have reasons for singling out the "death trauma" as unique.

Oops—you fell into an Aristotelian man trap. We tried to point out that the classification of evolutionary stages was purely an arbitrary one. You could reverse the order—put forams on top—and it wouldn't make any difference.

While we're all sideswiping, may we bring up a point which has bothered us for some time? It is decidedly incorrect to speak of Neanders vs. Cro-Magnon. Cro-Magnon was an exception and not the rule. The race as we know it is limited in locale and numbers. While the French anthropologists, we understand, would have us believe Cro-Magnon

was running around painting gawdjous pitchures on all the cave walls he could find, there is no shred of evidence to support the contention (unless we missed the point of several paleoanthropology lectures). The man who superseded H. neanderthalensis was probably a stocky little guy, about five foot seven, with a round head, darkish complexion, and who muttered, "Ou est la plume? Sur la table! Etc." The type specimen might be considered Combe Capelle.

Moreover, Kiethe and McCown's Mount Carmel race is strong evidence to us in support of the idea that the Neanders were absorbed by H. saps. So where in the name of Meganthropus paleojavanicus did the idea that the Neanders died of inferiority come from?

On the average, the cranial capacity of H. neanderthalensis was roughly 100-200 cc. more than that of the present day H. saps. However, the frontal areas of the brain relating to speech (and memory?) were very poorly developed. Thus the idea that saps were more intelligent sprang up and is, we believe, essentially valid.

But gosh! How we wander! And verbose? We're gettin' senile. But before Anonymous wields his mighty blue pencil we would like to toss around the following ideas. We were sittin' around, the four of us, discussing "good" and "evil" (Horrors! You know what Korzybski says about such discussions when the words are removed from context!) when "maturity" became the topic of conversation. Just what was it? Book-larnin'? No. Constructive living? No. So, we spent the whole weekend trying to get an idea of what "maturity" was. The results are given below. We make no claims about the validity of the date or just how you'd apply it, but at least the four of us now know what we're talking about when we use the word.

A Quantitative Definition of Maturity

Maturity is derived from intellectural integration and emotional integration.
Intellectual integration (ii) is equal to the ratio of use to potential.
Where "use" is self-explanatory
"potential" equals convolution count (number and depth of brain convolutions) and communication ability.
"potential" may also equal "intelligence" which may be measured by I.Q. tests, etc.
Then,
intellectual inefficiency ("stupidity") equals ii less than ½
intellectual efficiency equals ii greater than ½
Emotional integration (ei) is equal to the ratio of control to instinct
where "instinct" must equal 1 in all cases
"control" is subjectively self-explanatory
(Note that we purposely avoided using such terms as id, ego, and super-ego)
Then,
(a) Emotional unrestraint ("beast") equals ei less than ½
(b) Emotional balance ("emotionally mature") equals ei equal to or greater than ½ and less than 1½
(c) Emotional restraint ("automaton") equals ei equal to or greater than 1½
In equation (a) ei approaches zero as a lower limit and in (c) ei approaches a very large number (a googol?) as an upper limit.
Hence, a mature individual is one where (ii equals or is greater than ½; ei equals or is greater than ½ but is less than 1½).

Well, there she is! If that one doesn't make you "return, somewhat whirly of head, to our stalagmite perch" we'll eat it!—1204 Nogales St., Del Paso Heights, Calif.

You've even got our I.Q. and Binet tests whirling in gyroscopic fashion, Coles. Or, as one of our Cro-Magnon ancestors so succinctly put it, *Le garcon regardait la terre quand la fille ascendait l'arbre.* Which doubtless broke up many a grammar-school class in them days too. No comment on the Tin Woodman.

And pardon us but do we detect a certain very quantitative immaturity in the very glee with which you cast semantic confusion upon the concept of maturity? We do. And what are all those half (½) wits you toss around in such Cesar salad fashion? Do you believe in the V-type or straight-eight type of brain? Or the to-date uncontrollable ram-jet?

Answer please in five hundred words or less and receive 200 torn-off covers of old TWS-and-SS's—that is, if we remember to send same.

PSYCHIATRIC BOOT
by Rick Dikeman

Dear Editor: After reading your editorial preview in the preceding issue I had built up a few expectations with regard to MacDonald's "Wine of the Dreamers." I am happy to say that I was not disappointed. Although it suffered a little due to being cramped by space limitations it was an altogther satisfying novel. Oh, nothing which needs give pause to the committee in charge of bestowing the Pulitzer prizes, of couse. But up there with regard to pulp stf yarns.

I especially liked MacDonald's theme as it applies to an explanation for the age-old puzzle of human behavior at times. Think what an idea like this might do to the psychiatric profession!

In the way of a momentary digression—this lad MacDonald, as you have pointed out, is a writer to watch. He's not only good—you can pick up few pulp magazines in the stf, detective or sports field that haven't at one time featured a story by MacDonald. And he hits the slicks, too. You know, there's only one thing I'd like to know. How can a guy come up with so many plot-ideas? (Now there's a naive question if ever I heard one.)

To get back to STARTLING—I'll refrain from comment on the rest of the stories with the exception of the Captain Future opus. The former leave me with no words, no words at all—the latter, although having no comparison with modern science-fiction, is pleasantly reminiscent of a by-gone era.

If the old-timers were a bit on the lurid improbable side, then at least they could be counted on to provide a genuine goose-bump or two which today's stuff seems all too frequently to lack. Of course a little of the former goes a long way nowadays.

I trust that because of the number of letters which very handily jumped down the throat of the learned gentleman who lambasted the contributors to stf magazine letter-sections as juvenile, we have forevermore rid ourselves of censure of this type. At least in print in our own backyards. It would take a hardy soul indeed to brave the storm of ridicule which would certainly follow the printing of such a crank-letter.

If I remember correctly you printed one of my own scrivenings anent this matter—in which I let off a little steam in behalf of fandom and against pseudo-intellectuals such as the individual under discussion. And if you will remember, Herr Editor, there was another letter in that issue, signed by a man who followed his name with a string of those awe-inspiring letters, who would have been lucky to have got a passing mark in Freshman rhetoric. (How'm I doin', Prof?) Just goes to show you doesn't it? It must go to show you something.

How about more novels by Fred Brown and John D. and maybe a novelet by Ray (My-prose-is-out-of-this-world) Bradbury? No offense, Ray—just kiddin'.

All in all Startling and its companion are holding up right well. There is room for improvement but then isn't there always?—Church Street, Brooktondale, New York.

Up the MacDonald! He has a fine short novel coming soon in TWS and (we hope) working on another SS novel in the erstwhile. At least we hope it's the erstwhile by the time this column sees print. Both Fred Brown and Bradbury seem rapidly stratosphere-bound—so frankly we do not expect as much of their work in the future as we have had in the past. But maybe they'll give us a fictional nod now and again. We hope so for all of our sakes.

WITHER STF?
by Bill Searles

Dear Editor: I'm writing you because I want to hear your opinion on something. (Unusual, isn't it?) I'd like to see an editorial on it but if not, just a paragraph. The question—where is this sudden popularity of SF going to lead? Eight or so new magazines just came out, or are going to come out in the near future. It rather frightens me. Maybe if I had my way, these new mags would not appear.

Will S-F turn out to be a new mystery-type fad? Something looked down on as one night's quick, light reading—after "Slan" "Odd John" "The World Below"? One of the nice

things about fandom—it's small, friendly—fans like each other, despite feuds and arguments. What will happen to fandom—our fandom? What do you say?

Now that that is off my chest, I'll make remarks on your current issue, May. "Wine of the Dreamers" has the honor of being the most beautiful title of the year. And the story didn't disappoint me. The writing was skillful—the way it jumped from one locale to the other—the first part reminded me a bit of "Against the Fall of Night"—that is a great compliment.

The novelets—I'm exceedingly grateful to you for printing "Signboard". Awhile back, I was reading a back issue SS or TWS—saw a blurb Next issue "Signboard of Space" blah, blah. Ever since then I have been crazy to read it—thanks for the chance. The story was no classic but it was pretty good.

"Children of the Sun"—there's a hot time in the old town tonight—it was too crule. This series is beginning to annoy me—it goes on and on—each story adds a bit to the knowledge of the Denebian Empire but there are no conclusions reached, no climaxes—there is too much continuity for a complete story—too uneven for a serial.

The shorts were uniformly short. That is about all I can say.

Don't—please don't—drop the Reader's Departments. You would be dropping the best the mags have to offer.

Onward goes stf. Let's hope it doesn't outdistance us.—827 Nathan Hale Road, West Palm Beach, Florida.

It is our hunch that the stf-fantasy field is due for a good long rocket-run—perhaps beginning with Bradbury's brilliant THE MARTIAN CHRONICLES (reviewed in this issue). Science fiction is just about the only topical escape the currently H-harried world can find.

But don't let it throw you. We have another hunch that stfandom will still be around after the rocket has returned to Earth—either on some high plateau or in the slimy swampbottoms—complete with fads and feuds and foolish if quasi-endearing fripperies.

The booming high brass of popular contemporary "literature" may move in for awhile—but they'll be bounding off after fresher fields long before the essential core of science fiction and its fans are destroyed.

LONGHAND LADY
by Felice Perew

Dear Editor: Once again I take pen in hand to write you (where have you heard that before?). WINE OF THE DREAMERS was an awfully good story although your pic as usual illustrated an entirely unimportant incident therein. SIGNBOARD OF SPACE was very good as was CHILDREN OF THE SUN—I like Captain Future. THE BLACK EWE, SUMMER WEAR and THE HISTORIAN were all okay. With which I'll crawl back to my hive (where I am queen bee for a day—ouch, that stung!).—2860 Dartmouth St., St. Petersburg, Florida.

WEDDING BELLES, ETC.
by Robyn le Roy

Dear ?: Wott'r all our femme fen doing getting married? Gee-whiz, gals, we old many-years-married guys sorta enjoyed the vicarious romance your single-blessedness implied! Sincerely—tho I've never written to either nor had a missive from Bradley nee Zimmer or la Slavin, I've become so well acquainted with both of you thru your letters that I make bold to offer fondest hopes for the greatest that marriage can offer. Such vital and entertaining personalities must surely have attracted thoroughly-likeable menfolk. Now how about introducing them to the fold?—918 Lloyd Avenue, Richmond 20, Virginia.

Okay, Robyn and Felice, we'll have to wait around awhile to see who got stung (if anyone, we hope) in the recent matrimonial sweepstakes which took place among this department's correspondents.

Incidentally, Felice, we cut your note to ribbons because (1.) we have decided to cease running comment on the artwork in and upon our magazines, and (2.) only occasionally and when interesting will be run comment on comment by readers upon comment by other epistoleers. Catch? Natch!

JUST IMAGINE!
by Lin Carter

Cheerio: A very good issue this time. The best novel in months and months was WINE OF THE DREAMERS: very well written, unusually well plotted, with competent characterization and pretty fair backgrounding. I found the story particularly interesting, a quite unconventional plot (imagine! The Earth hero marries, not his luscious female scientist friend but a baldheaded alien from Ormazd!), developed with a fine sense of suspense. It was quite the best novel in some time.

Up to this I knew MacDonald as the author of several not especially outstanding shorts and novelets in your magazines and a few of your leading competitors. Now it seems he is a writer of considerable talent and with Arthur C. Clarke and Poul Anderson is an author to cultivate and encourage. His first novel was really outstanding.

Naturally, after a fine novel like WINE OF THE DREAMERS, the other stories in the issue tend to pale into insignificance. Few writers in the field could hold against such competition like Edmond Hamilton. I thot his second novelet in the current series even better than the first and believe me that's saying a lot!

All the familiar Hamilton ingredients are there—well-handled action, smooth-paced narration, clean-cut characterization, richly handled emotion, lavish and exotic description and the others. Hamilton has a style all his own. Some may deride it, call it juvenile and hack, but I've never found an author who can weave his spell so blindingly.

Only complaint I can find in CHILDREN OF THE SUN, is that it wasn't long enough. Hamilton always seems at his best in the longer stories. Noticed a similarity between the converter gadget in this story, and the machine in PRISONER OF MARS (one of his first novels in Startling) that transformed men into living light entities.

The rest of the stories, despite a rather impressive line-up of authors, were no great shakes By the by, chum, I picked up your two new magazines on the stands, and was quite favorably impressed—if not with the fiction at least with the format. The trimmed edges on the Wonder Annual were the answer to a fannish prayer. How swell it would be if we could only promote something of the same on the edges of Startling and old TWS! Selah!—1734 Newark St. So., St. Petersburg, Fla.

Okay, chum, thanks! We thought WINO was pretty special ourselves. As for John D. MacDonald, he's pretty interesting material himself. He's a tall, thirty-ish, blond and good looking specimen, a Harvard Business School graduate, who wound up as a lieutenant colonel in the O.S.S. during the war and had plenty of time to decide to write and think up stories.

So when he got out he started and it's our hunch (that word again!) that he's going a long, long way. He writes rapidly, fluidly and with fine visualization of his subject. Also, he is a mighty good story teller. He's on the right road and we hope he comes our way now and then in the future.

PSTFEUDONYMS
by Cordell Mahaney

Dear Ed.: If, as you say, you enjoyed Ray Bolger as the Tin Woodsman in that movie "The Wizard of Oz," then all I can say is that you need a new set of eyeballs. I enjoyed him as the Scarecrow. Jack Haley was the Tin Woodsman. He played the role magnificently, too.

Now let's move on to WINE OF THE DREAMERS. The main flaw here is that author MacDonald let the story talk

itself to death. Bradbury would have put the whole works into 10,000 words or less. Too, there was no mystery to it. Upon finishing the first seven pages I was always two chapters ahead of Mac. After wading to page 59 I gave up and read the end just for the heck of it. Not only was it forced and mechanical—it was also disappointing and uninteresting. Unsatisfying, if I have to be blunt. (Forgive me, MacDonald, but I'm afraid you foisted a dud on us. When, and if, I get my first story published, you can take revenge on me by knocking it as violently as you like.)

Carl Jacobi flopped too, which is unusual. THE HISTORIAN was absolutely illogical. By that I infer that our boy Lak Dhrow couldn't possibly have made the grievous error which he did. Editorials and reader departments in those magazines (being, I assume, magazines of this twentieth century) would have convinced him unreservedly that the "histories" were mere fiction. However, since Jacobi doesn't slip up often, I'll let him off this time with a word of warning. Just watch it, son! Incidentally, Ed, his WAR OF THE WEEDS would make a fine Hall of Fame offering, wot, wot?

For CHILDREN OF THE SUN by Ed Hamilton the best I can say is "juvenile." Curt Newton makes a very poor grade superman. The way he resists Joan Randall's charms and obvious good intentions is implausible, improbable, and highly unlikely. With his spotless purity and his pointless scruples he reminds me of a neurotic twelve-year-old. Who else would prefer the companionship of a pack of freaks to that of human beings? If he doesn't think human friendship worth cultivating (and it's obvious that he doesn't), it isn't likely he'd worry about the many menaces from outer space which plague humanity, nor the various hordes of bems which inflict their foul presences upon us from alien dimensions. Down with Captain Future, I say, or down with those monstrosities who accompany him everywhere.

THE BLACK EWE might have been a good story if Fritz Leiber hadn't thrown in too many extraneous details and foreign comments. He talked all around a plot without ever actually getting down to business. The whole thing seemed obscure and incomplete, leaving with the reader an acute sense of dissatisfaction. Mr. Leiber's trouble was that he didn't revise and extend the chain of events to a definite conclusion.

And while we're talking about unfinished stories, I'd like to mention that this is the trouble with nearly all of the stories now being published. A great many authors have the tendency to stop writing just when they're on the verge of revealing something important or decisive. They leave the outcome in doubt and the reader dangling precariously. Maybe they just can't figure out a good denouement. Maybe they just don't give a hang so long as they get the cash which reposes in Ye Ed's double-barrylium duralloy secret vault.

For the record, my idea of a story—and correct me if I'm wrong—is this—it opens with a central character (or group of characters) involved in a situation or faced by a problem which demands immediate attention, which must, for understandable reasons, be solved in the quickest, most direct manner possible. The lead character concentrates unvaryingly on his problem, and as the story action progresses he does not take time out to play around with stuff which offers no assistance in getting him out of his mess. In short, he does not digress.

He is determined to defeat all obstacles and reach the happy ending in spite of hell and high weeds. When the final crisis comes his fate is decided, one way or the other, and his future is indicated with some degree of certainty. He is not, as several writers appear to think, left out on a limb and surrounded by a maze of unanswered questions. And let all advocates of the "Lady or the Tiger" school be warned. A puzzle is not a story. Mr. Stockton's opus was a rarity in which the central interest outshone the defect.

All right, now let's get back to the May issue. SUMMER WEAR seemed a trifle thin for some reason but I like de Camp and I don't intend to deal too harshly with him. It would be traitorous of me to bite him after being allowed to cast my old optics upon such gems as "The Hibited Man," "The Wheels of If," "Invaders from Nowhere," "The Undesired Princess," "Solomon's Stone," "Lest Darkness Fall," "The Carnelian Cube," "The Incomplete Enchanter" and "The Colorful Character."

Hold it! What's this coming up? You'd better take hold of yourself Ed. This may be something of a shock. The best story of the issue is none other than brother Frederic A. Kummer's SIGNBOARD IN SPACE! It's terrific! In view of the past duds in the Hall of Fame I did not expect to find such a splendid story there. I always start a H. of F. story with the preconceived suspicion that it will be rotten but this one won me over despite my skeptical misapprehensions. It was as good as any of Robert Heinlein's recent contributions. I'll go a step further; it was better!

Heinlein, of late, gripes me with his characters. Most of them are greedy wiseguys with criminalistic tendencies and stupid motivations. They are, in a word, offensive. However, Heinlein's ability to express his ideas well is beyond reproach, and I haven't forgotten that he wrote quite a few good tales before the slicks grabbed him. It would be nice to see something by him in the vein of "Hell Hath Fury," "Bit of Tapestry," "Lost Legion," "Prelude to Armageddon," "By His Bootstraps" and "The Unpleasant Profession of Jonathan Hoag."

But now that this desecration of the Heinlein name has made me an outcast in the eyes of all science-fiction supporters and a radical in the opinion of Ye Ed, I may as well commit the ultimate heresy—I think Kummer's SIGNBOARD IN SPACE tops every Mars tale I ever read with the exception of Ray Bradbury's AND THE MOON BE STILL AS BRIGHT. I hope someone has sense enough to put it in an anthology.

I notice that several writers-in asked you to answer all questions in their letters. I like the idea. Your comments are always welcome and informative. (Hold on there! Don't misinterpret that as flattery. It ain't. You simply bring out interesting sidelights regarding the field.) And besides, readers wouldn't ask questions if they didn't want a reply. By the way, I have a question to ask you. How many of the names on the following list are nom de plumes? And in cases where the names are no longer being used, who are the bonafide owners of those names? Also, how many of them belong to Henry Kuttner—who in my estimation is old man science-fiction himself? Here goes:

Dirk Wylie.
Raymond F. Jones.
Bryce Walton.
R. C. W. Ettinger.
William Morrison.
J. W. Groves.
Kelvin Kent.
Cleve Cartmill.
Rene Lafayette.
James Blish.
Arthur C. Clarke.
Carter Sprague.
Jack Vance.
Edwin James.
Arthur K. Barnes.
William F. Temple.
George O. Smith.
John D. MacDonald.
Fredric Brown.
Blair Reed.
Benj Miller.
Noel Loomis.
R. W. Stockheker.
John S. Carroll.
Donald Laverty.
Wesley Long.
William Tenn.
Walt Sheldon.
Emmett MacDowell.
Matt Lee.
Kenneth Putnam (this one is Heinlein, isn't it?).
John Barrett.
E. Everett Evans.
Samuel Mines (I suspect this one is you, Ed.).
Alexander Samalman (you again?).

Well, that turned into a long question, didn't it? I had forgotten there were so many of them until I started looking backward. If I haven't gone too far already, let me append two additional names: Ted Powell, and that splendid gentleman, Frederic Arnold Kummer, Jr.

In closing, I'd like to add that I like the way you arranged the print on the first page of APPOINTMENT IN NEW UTRECHT, in the March 1950 issue. Used as it was in a single, book-like column, it looked ten times better than the double column which is common to pulp magazines.

If you started using a single column type of page, what with the present boom in science-fiction, I have every conviction that your circulation would soar to unheard-of heights.—12552 Magazine Street, Vallejo, California.

Okay, Cordell, we'll skip your opinions from MacDonald through Heinlein and get at that list of names. Where we *can* answer (i.e., where we know the answer) we'll level. Where we don't appropriate comment will be inserted. To horse—

Dirk Wylie—former author and agency head who died a few years back. His widow and Frederik Pohl (James MacReigh—there's one you forgot, kid) are carrying on. Today, alas, definitely a pseudonym.
Raymond F. Jones—Raymond F. Jones.
Bryce Walton—Bryce Walton.
R. C. W. Ettinger—R. C. W. Ettinger.
William Morrison—Joseph Samachson.
J. W. Groves—J. W. Groves.
Kelvin Kent—Henry Kuttner and/or the late Arthur E. Barnes.
Cleve Cartmill—Cleve Cartmill.
Rene Lafayette—L. Ron Hubbard.
James Blish—James Blish.
Arthur C. Clarke—Arthur C. Clarke.
Carter Sprague—Sam Merwin, Jr.
Jack Vance—Jack Vance.
Edwin James—James Gunn.

Arthur K. Barnes—Arthur K. Barnes and he's one we'll miss.
William F. Temple—William F. Temple.
George O. Smith—George O. Smith.
John D. MacDonald—John D. MacDonald.
Fredric Brown—Fredric Brown.
Blair Reed—never heard of him.
Benj. Miller—Noel Loomis.
Noel Loomis—Noel Loomis.
R. W. Stockheker—R. W. Stockheker.
John S. Carroll—Holy cow! This is a pseudonym—whose we've forgotten.
Donald Laverty—ditto.
Wesley Long—George O. Smith.
William Tenn—Philip Klass.
Walt Sheldon—Walt Sheldon.
Emmett MacDowell—Emmett MacDowell.
Matt Lee—Sam Merwin, Jr.
Kenneth Putnam—you're so right—Heinlein.
John Barrett—John Barrett as far as we know.
E. Everett Evans—E. Everett Evans.
Samuel Mines—Samuel Mines and them's shootin' words you spoke.
Alexander Samalman—Alexander Samalman—shootin' words again.

And that's that!

THE SINUSITIS STOMP
by William N. Austin

Dear Sir: Forgive me for another drab letter—this one. If it isn't sinusitis bugging my eyes, I'm torturing myself trying to quit smoking for a while or something equally ridiculous.

Nonetheless, your May issue of STARTLING STORIES deserves comment, albeit desiccated in manner of presentation. It's the best issue since the November, 1948, winner.

For once the lead novel is the best feature of the issue. MacDonald's WINE OF THE DREAMERS incorporates some of the better features of science fiction plotting, additionally brightened in this case by MacDonald's smooth style of narration. Altogether a tale which renders difficult the locating of flaws.

Second in my esteem is Leiber's short, THE BLACK EWE. This one deals with familiar elements but Leiber fashioned a smooth story nevertheless—in many respects one of the better short stories of the year.

SUMMER WEAR eased into third place just ahead of Jacobi's short short, THE HISTORIAN. DeCamp seems funnier in your magazines than in some of the others in which he appears and this latest Osirisian episode is no exception. Mr. Jacobi telegraphed his punch with an assist by the illustrator.

Oh yes—the Hall of Flame Classic flares brightly this time with a solidly entertaining narrative. It was better even than the pleasing Captain Future episode.

As for that rating system, Dear Editor—no, I throw no cards nor do I fling darts until after I've rated the stories. The Bergey covers make good targets, so replete are they with bulls'-eyes and sundry bric-a-brac. But sometimes I construct effigies of editors—wax effigies—after particularly bad issues. They make even better targets but they hardly assist in obtaining a rating of a story.

Now, the ratings are obtained thusly—first, I rate a story by the Initial Reaction. The weighed value is 50%. The other 50% of the rating is obtained by averaging the individual ratings of Plot, Theme, Characterization, Style of Narration and Reader Interest. Sometimes the detailed analysis of elements turns out equal to or nearly equal to the Initial Reaction—sometimes not. In the instance of this issue the differences were negligible—less than .06 in every case.

The average totals:

1. MacDonald. WINE OF THE DREAMERS	2.36
2. Leiber. THE BLACK EWE	1.95
3. DeCamp. SUMMER WEAR	1.75
4. Jacobi. THE HISTORIAN	1.71
5. Kummer. SIGNBOARD OF SPACE	1.51
6. Hamilton. CHILDREN OF THE SUN	1.41

Issue average: 1.78—very good!

If any Eastern or Midwestern fans decide to thumb their way to the NORWESCON I'd recommend Route 40 from St. Louis to Salt Lake City and then Route 30 to Portland. Another good route, I'm told, is Route 12 (Chicago to St. Paul), then Routes 10, 85 and 2 to Seattle and 99 to Portland.

How about it? Anybody planning to attend the NORWESCON interested in a football or baseball game (no, not "game"—I mean "exhibition")? Say, at five a.m. Labor Day? Hmmmmmm?

Oh yes. Hitchhikers from the East had best allow themselves five days from St. Louis to Portland. It can be travelled faster, of course. Yes, and four bucks per day on the road—food and modest shelter.

Dear Editor, I have an unusual hobby. Instead of fan letters, or autographs, I collect fingernail parings and hair clippings. I'd be happy, nay, most enthusiastic, for your contribution. Someday, when you know deep in your heart that your latest issue was a failure or a comparative flop and you feel a sudden arthritic twinge, think of me. I'll be thinking of you.—3317 West 67th Street, Seattle 7, Washington.

To which all we can say is praise to Allah that we keep our hair close cropped and bite our own fingernails. Little wax effigies and hot needles seem to be your only voodo bets where we are concerned. And furthermore our Sergeant Saturn days left us pretty much impervious to all such mummery.

As for your system—it leaves us limp. We'd never have the nerve. Either we like a yarn or we don't—and that's that. We only go into the whys and wherefores when flaws are apparent to our jaundiced vision.

Thanks for giving with the how-to-get-to-the-Norwescon-the-hard-way tips. We hope you and Ruth and the rest make a magnificent thing of it in your far-away apple land. In fact we wish it weren't so far away.

GIBSON GIBBERINGS
by Joe Gibson

Dear Editor:A very controversial question's been bothering me. The stf field has become a promising enterprise for general publication. The book publishers, the national slick publishers, in fact the whole publishing field has realized that. Reputable critics have, after a proper amount of research, realized that in science-fiction we have not only colorful imaginative melodrama but an entertaining and stimulating guise for some pretty solid thinking. Incidentally they've pointed out that many moot subjects could be treated seriously and educationally under the microscope of science-fiction, where in other fields of fiction they're merely vulgar.

From a business standpoint stf has spread out to other forms of publication, has infringed upon the markets of other fields of fiction. Also it's becoming increasingly apparent that the stf-reader market is not simply another pulp-reader market—that the stf readers seldom bother with the chain publisher's western, adventure, detective, sports and love-story magazines.

And yet the chain publishers are continuing to set the same policy of make-up and general style for their stf magazines as they are for their other pulp magazines. Frankly I don't believe any arguments that stf pulps are selling to a steady dependable pulp market and that there's no reason to make changes for the sake of questionable quality and lose the pulp market. In the case of all other pulp publications such arguments hold water—but not in the case of science-fiction pulps.

On the contrary the general policy of bright covers and fast-moving action are becoming obstacles to the stf pulps' sales appeal! Anyone who reads stf, plus some general reading knows that stf covers could be far more attractive, striking and provocative if they were stf rather than general pulp covers. Also a great many more really good stories could be had if authors had a bit more freedom from that well-known good fast hard-hitting pace. Bradbury got away from it and look what happened!

But I do see that any attempt at neater, cleaner format in stf pulps would cost money. It might almost necessitate an entirely separate office for that one field, an entirely independent publishing schedule. But I'm also wondering if the returns from increased sales wouldn't more than make up for that.

I'm wondering, because it's becoming increasingly apparent that the stf-reader market is definitely an entirely separate market, one with its own likes and dislikes considerably differing from those of the general pulp-reader market. Could it be that the chain publishers are giving this some serious thought too?

With that hunk of stuff out of the way, let's look to the May Startling. D'you know that SIGNBOARD OF SPACE completely outshone every other yarn in the issue? Except for de Camp's SUMMER WEAR—a story which must have a niche of its own. Good light humor like this is indeed desirable—especially among the short stories. Adds spice to the general make-up. But the factor that placed SIGNBOARD head and shoulders above the rest was that the "idea"—the Martian canals being a signboard—provided the story rather than serving as mere background scenery.

There's a bit more to be deduced about the possible future applications of Einstein's Unified Field Theory. The

major application would, of course, be a sort of cross-index between all the cumbersome specialized fields of science. Such a cross-index would not only make reference delightfully easy for a specialist in one field wanting information from another field but could very probably cut down the amount of studious cramming these poor devils must do to become specialists. We need that now. We really need it!

But—this possibility of controlling gravitation. The incentive to develop this application is at the moment tremendous—without gravity control it's much easier to wage war on Earth from the Moon than to wage war on the Moon from Earth! As things stand the first nation to control the Moon virtually controls Earth—but with gravity control that situation is cancelled out.

Obviously then, while trying to develop the first rocket to reach the Moon it's also advisable to try to develop the first gravity control device in case someone else beats us to the Moon. Confusing but all very logical. Also, once gravity is controlled, no atomic attack could be successful, no nation could be completely demolished, no power could be destroyed.

In fact, any man with enough dough and know-how could practically say nuts to the world and take off where he could be his own boss. Afraid all the little pet ideologies of Utopian societies would go bust then. We might even revert back to the stage of individual freedom where every man packs a gun! Come to think of it that wouldn't be much of a change either except that present conditions have all too many of the wrong characters packing artillery. I often wondered what would've happened in China if every Chinese toted a sixgun and believed compassionately that possession was nine points of the law.

Comes this controversy between the Coles and Poul Anderson, and darned if I can agree with either of 'em! I can remember the last war as a period of months when I was continually terribly afraid I was gonna die—consequently I never want to be that scared again. Me, I don't want no more war. So the baby touches the hot stove—same results.

But I've known individuals who didn't have fear, who scoffed at it. One in particular was a Tennessee boy who enjoyed nothing more than to start a fight in a barroom, then wade from one end of the room to the other, cracking skulls together. When he was caught in an enemy mortar barrage tho, he was literally frozen, terrorized with fear. He never quite got over it.

So I'd say the only reason fear, any kind of fear, is a bugbear to humanity is simply because humanity hasn't learned enough about what scares 'em and how to face it.—24 Kensington Ave., Jersey City 4, N. J.

Well, Joe, there's nothing we'd like better than a separate establishment in which to peruse missives such as yours. There are practical considerations to be met, of course—but we hope your wishes eventually come true.

As for your Pistol Packin' Periclean age—well, that we can do without. And don't be too sure that he who controls the Moon controls Earth—especially since, by the time such control is established, virtually every power on good old, dear old Terra (or Tellus, more properly) will have at its disposal the means to chain-reaction *(there's* a fine verb) good old, dear old Luna right out of the sky.

Agree upon the Unified Field index, upon war and upon barroom brawlers. Hey, this is turning into a positively nauseating peace-pipe session. Yes indeed, Mr. de Mille. Yes, indeed.

ON THE AIR
by Mrs. Louis Ramirez

Dear Sir: Ordinarily I am content to buy any and all magazines, books, etc., on the market with respect to science fiction, the supernatural and so on—but tonight I am writing.

On Station WMAQ (Chicago Station & time) at 7 p.m. I was listening to Dimension X. This same story appeared in one of the current stf magazines—unfortunately I have already passed my copy on and could not check as to which one it was in. I hope it was one of yours as it was good.

Your magazine usually runs good stories (short and long) so I may have read it there—if not I am sure some of your readers did. Incidentally there is a new program on Saturday afternoons—2:30 p.m.—called Hall of Fantasy—Station WGN. Very good.

This is probably the first and last you will hear from me—but I'll keep on reading your magazines—all of them.—4347 West Monroe, Chicago, Illinois.

The program in question (the Dimension X inaugural) did not, alas, come from one of our magazines—but in the current rush of radio and television to fantasy and stf you'll be hearing and seeing plenty of the yarns you read in SS and TWS on radio and TV. Hope you continue to enjoy them, Mrs. Ramirez.

CAP'S BACK—AND WE'VE GOT HIM
by Neil J. Gourlay

Dear Sir: I would like to congratulate you on bringing back CAPTAIN FUTURE. As long as the stories are well written there is no need to fear that they will be called juvenile. The bad reputation which CF has acquired was, as one of your readers pointed out, culled when Edmond Hamilton had stopped writing the novels and, I may add, was not unconnected with the fact that at the time one S. Saturn was in his heyday.

I would like to add my request for one FUTURE novel per year and a novelet every issue. Surely you can now stop printing the Hall of Fame stories since you have two reprint magazines on the market. The space used by the Hall of Fame could then be devoted to Captain Future stories.

Another alternative I would like to suggest is a revival of STRANGE STORIES with a 25,000-word CAPTAIN FUTURE novel in every issue. This would guarantee a sale to the numerous CF enthusiasts and if the remaining 40,000 words were devoted to fantasy and weird novelets and shorts you would also attract the numerous fantasy fans, thus capturing two publics.

I do not agree with your statement that a fantasy magazine would not pay. There is only one new fantasy magazine on the American market and it is only stopped from being a best seller by unimaginative editing—of which, I am sure, you could not be accused. On the other hand there are three best-selling weird-fantastic magazines printing only reprints.

There is also a demand for the revival of a fantasy magazine, one printed by one of your rivals, which, due to other reasons, shows no signs of being fulfilled. I refuse to believe that the readers who want this other magazine revived and the many readers of the fantasy reprint magazines would not flock to buy a revived STRANGE STORIES, publishing new weird tales by Bradbury, Kuttner, van Vogt, Daniels, etc., and a CAPTAIN FUTURE story by Hamilton.

So how about it, Mr. Editor? Are you convinced? May I also suggest you pay more attention to the British market? Paper controls have now been removed over here and one of your rivals is printing its current issue in full in a British edition. THRILLING WONDER and STARTLING do not come out regularly and are eprints of issues from three to five years old. This is surely not the best way to sell the magazines to the science-fiction-starved British public.—54 Grosvenor Drive, Whitley Bay, Northumberland, England.

We are very much afraid you are not going to like our answers—those we can give you, Neil. You undoubtedly, considering your predilection for the eerie, have heard of expressions of horror, sheer and undiluted, upon the human countenance. You may perchance, or rather per mischance, have seen same at times.

But if you care to see the green deep-freeze of utter and ultimate dread upon the face of man born of woman, just stick around while someone says something about reviving STRANGE STORIES to an executive of this company. Yipe! We tried it a few times.

As for bringing the CAP back in all his glory, we fear that is out. Mr. Hamilton

has in general progressed past this stage in his career and has little desire so to tie himself up with Curt and his pals. For which we cannot blame him. So we fear you'll have to go along with CAP FUT in abbreviated form for the nonce.

One ray of hope, Neil—you may already have noted in this "editorial previews" of this issue (we call 'em blurbs) that no Hall of Fame Classic is announced—for the first time since this magazine was born almost a dozen years ago. In short, the HoF is finished for the present—and for the very reason you suggest its abolition, the new reprint magazines.

Alas, we have absolutely no control over contents, appearance or frequency of publication of the British versions of our magazines. But we can guarantee that if enough of you buy them they'll acquire more burnish and regularity.

SILVER THREADS, ETC.
by Rick Sneary

Dear Ed.: This is about letters. Ah. yes, a letter about letters. Now if some one answers it we will have letters about letters about letters. Truly enough to drive a fan to FAPA, (if he wasn't already there).

I think the pro-mag letter, more than anything else, point out to me the fact I'm getting old. When I first started reading stf, back in 1944, the first thing I read in a mag was the letter columa. I looked for old friends, or possible new ones, and knew almost every-bigname writer you had. To day I read the column in snatchs, while one of the stories is digesting.

This isn't the fait of the letters eather, as they are much better than in "my day." It is just, well like you, I've heard it all so many times before. After reading the 'printed' letters for over 5 years, I begain to understand what you must go through with the unprintable ones. It is undoubtedly enough to drive anyone to drink. (That is, if the stories and the Publisher hadn't allready.)

The ever repeating babeling of self asured, and proclamed, expert critics and advisors must get pretty tiresome. I know, that though I looked with disfavor, a few years ago, on any Old Gaurd fan that dared to critasise the new fans, I find it a stong timtation to do it myself now. These young upstarts that think becouse they write letters to the pros corrospond with five fans, and read a fanzine, that they are fans.

Aaah, the poor dreamers, how little they know. The last ture fan became active about 1938. After that came the barbarians. These swong the center of fan intress back to the Pro's, and away from the prue fannish activity . . . Yes, of course I'm a barbarian, but I have tryed to live it down, just as many of these readers could, if they worked at it about ten years.

There are acouple other mater you and the readers brought up that interest me. This talk of humor in science-fiction. Now I'd be the last one to say that humor had no place in science-fiction. I've read some good stories than gave me a good laugh, such as IRATATED PEOPLE. But on the other hand, why should we have humor in science-fiction?

You have used a number of deCamp's stories. As some one said locally, some one once told deCamp he was a humorist, and he has been trying to act like it ever since. Combind with Pratt he turned out some good stuff, but alone . .— Another writter that mixes humor with a iron hand is old friend Hank. Kuttner has written some fine stuff, but I didn't laugh at it.

The throuble with stf humor, it falls all to offen in the anumal-humor type. If you will pardon an exagerated bit of over simplafacation, I class all humor in two groups. One, is like Grace Allen uses. You laugh at the person because he isn't smart, or something you think is funny happens to him, like falling an braking a leg.

The other type is use by such comics as Bob Hope. That of the witty remark, the play on words, or the pun. This, you laugh with the comic, as a tribute to his quick mind. This is the type of humor enjoyable only to intelagent anamals. All anamals can laugh at the first kine. . And as I said, all to much stf humor is merely laughing at someones stupid actions. One of your competators uses so much of this type story it is sickening. You have never used enough of eather to be objectionable, but kine of think it over before you get more.

After all, why do we need humor in stf? For a well balanced reading diet? Oh come now, only the most rabid young read, reads only stf. One has to read other type to fully injoy the return to stf. And with so much good humor written out of the field, why wast time on it while you are in it? Not unless people like Thuber start writing for you.

I want to say something in defince of me old friend Mrs. Bradley. There is much to be said in favor of a knife over a gun. Not so much a sward, but other kines. Remember in the last war we heard about such playful things as bolo's and machete. A knife in the hands of some one that knows how to use it is a most un-nearving thing, and many a army man has found out. The Army does still use bayonets, doen't it?

Of course you are right, they haven't assassinated anyone with a knife for a long time, nor do you win wars with a three foot peace of steel. But, tis not always the boys with the big noise guns that do things. When you infeltrate the lines, you don't knock of the sentries with a Burp-gun. Not unless you want to take on the whole army. You use a piano wire or a knife. And the knife is the quicker.

And on the purely dreamers side, it might be a better world if we did uses a few more swards. Atleast between the wars. Take up the old art of dueling too. It would probably help the world in a number of ways. . People would be more graceful, more thoughtfull of others feelings, and it would thin down the overcrouded population. And as for murder, well they kill alot with cars, and with far less reason. .

Lastly, answer me this, would you, if you had to make a choise, reather face a madman in a dark room with a loaded revolver or a 6 inch hunting knife? Answer that and then say which is more deadly.—2962 Santa Ana St., South Gate, Calif.

Rick, frankly we can think of a lot pleasanter ways of getting thinned down than by having our excess avoirdupois pared away with a snickersnee. And to our knowledge duelling was never, in its heyday, a boon to good manners. On the contrary it put the bully on top all too often.

We may have told this before but we're going to tell it again—it's one of the two best duelling stories we know. During the Tripoli fracas early in the last century, part of our blockading squadron put in at Malta for repairs, etc.

And a little fourteen-year-old midshipman, on his first shore leave, fell afoul of a notorious British naval officer-duellist, who managed to frame him into a duel. In tears the boy went to Stephen Decatur, his commanding officer and a most accomplished duellist himself—you may recall that he was later slain in a duel by Commodore James Barron at Bladensburg, Maryland.

Decatur willingly agreed to second the youth and told him not to worry. When the Englishman's seconds called the following day, Decatur, as representing the challenged party, had choice of weapons. He selected pistols at five paces. The Britishers, aghast, cried, "But that would be murder!" And Decatur merely smiled and said, "Well?"

P.S.—there was no duel.

As for humor, we love it in stf or anywhere else. When we can get it or any reasonable approximation thereof, that is (brother, we should have studied law after that one!). But when it comes to duels—

well, we prefer to settle ours with encyclopedia, lexicon or thesaurus, to say nothing of the various sports yearbooks.

It's nice to hear from you again, Rick, and we hope you'll not be so long in writing us next time.

THAT TIN WOODMAN AGAIN
by Vernon L. McCain

Dear Editor: The level of quality pretty well rises and falls with that of the novel so it is not surprising that the May issue, featuring MacDonald, was well above average. What was surprising was that one of the shorts managed to top the novel. I am of course, referring to that charming little shocker, "The Black Ewe."

The rest of the stories were about as expected. A poor HOF. Cap Future sadly hacked up in novelet form. De Camp turning in another of the disappointing jobs he invariably does for you.

I agree heartily with your opinion of Ray Bolger, but Ed., what's happened to your memory? Or did your pencil just slip? I can see how, over a period of ten years, your recollections might become confused, but you say you caught a recent revival of "The Wizard of Oz" and all I can figure is that you must have slept through it. Bolger was wonderful in it, it's true, but he played the scarecrow, while the tin woodman was handled by an up-and-coming young comedian named Jack Haley.

I'm willing for you to continue the HOF provided you reprint all the Pete Manx stories, especially my favorite, the Shakespeare opus. I always thought that would make a wonderful musical comedy for some imaginative Hollywood producer with Jack Oakie playing Pete.

Where is Fredric Brown? Thought he was supposed to be such a prolific writer and nothing in three or four months.

How many agree with me that the fuss made by certain super-cultured critics about split infinitives and dangling participles is pretty silly? I seldom notice these unless someone mentions them.

I struggled through these construction rules in high school, but even then I considered that such hair-splitting was carrying grammatical construction to absurd lengths.

I notice a couple of comments in the latest TEV anent this and, personally, I believe 99 out of 100 readers are like myself in that they rarely worry about split infinitives. What's more, when they are pointed out I usually prefer them to the correct method. They add a certain richness to the prose that is missing in the more stilted and circumscribed imagery of "proper" English.—c/o Western Union, Payette, Idaho.

All right, so we were wrong—we've admitted it, haven't we? As for your split infinitive leaning, watch it, bub. We like a certain amount of Cyril Connolly's Mandarin in our English and will fight to the death to maintain it.

FUTURIANA
by William D. Knapheide

Dear Editor: Since I have now completed the second story of my favorite science fiction character since his resurrection, I am now ready to give the results of my meditations on same. I shall cast the rubies and emeralds first.

(1) The Captain Future stories are good—almost as good as they used to be before Sterling took them over. (2) This second CF novelet, CHILDREN OF THE SUN, shows promising evidence of originality. (3) Hamilton handled Philip Carlin very well considering that Carlin was created by Brett Sterling in RED SUN OF DANGER.

The precious jewels having now been taken care of we now turn to the fire and brimstone. The elements from below sear my enjoyment in only two places. (1) The CF stories are squeezed into too small space. They should be of novel length for the greatest effect. (2) THE WORLDS OF TOMORROW section should be revived. This section lends lustre to the CF stories so that they stand out like a sparkling diamond or a blazing fire ruby.

Now to the lesser authors (The only author who surpasses Hamilton is Dr. E. E. Smith Skylark). WINE OF THE DREAMERS is a good novel but MacDonald will never be able to equal Hamilton. SIGNBOARD OF SPACE was fine but should have been published only if no Hamilton or Smith yarns were available. THE BLACK EWE was passable—as fantasy but should not be in a science fiction magazine. SUMMER WEAR I hope to see in the Hall of Fame ten years from now—if no Hamilton shorts are available. THE HISTORIAN is so horrible that it must have been forced upon you by RU GHUR, i. e., you must have run out of good stories.

THE ETHER VIBRATES, that section which shines with the glitter of the bright gems of fandom showed its usual vigor and erudition (or lack of). Poul Anderson's missive gave forth with a nice tidbit information. Ganley's letters are always superb reading also—so superb that I suspect he is trying for the ethergram Hall of Fame.

That pore sole from Louth Gate, he can be aiming for nothing short of the Rogues' Gallery. Ignoring his spelling as a result of a complex to be glorified, his support of the present NFFF convention policy is inexcusable. I could write a book on this subject but since I do not want to monopolize good letter space, if any fans would care to discuss this NFFF policy further correspondence is invited.—P. O. Box 868, San Francisco, California.

Quiet with those jewels, Bill—you've got us feeling like a perambulating hock shop. Glitter, glitter—have a fritter. Evidently you're a Hamilton fan. So you should have liked the June SS, with Ed's lead novel, THE CITY AT WORLD'S END. And why don't you and Sneary fight it out to the proverbial bitter end without reference to these pages?

THIS ISN'T A LETTER
by C. John Sevier

Dear Editor: This isn't a letter written to help fill out your section. Lord knows you get enough of them. I'm writing you about your May issue, which I finished last week as soon as it hit the stands. I mean the issue of SS.

I've been reading stf for just about 20 years and I've seen and read all kinds of mags printing it. I've seen them come and go for various reasons but I've never yet written to any of them until now. Most people who write to them do so (I may be wrong) just to see their brainstorms and names in print. I think I can prove that.

I've a standing order with my dealer for every stf mag that's published and I get them all. In reading thru the letters I come across the same names of these ink wasters over and over again. It's got so I pray that all editors will cut out the fan departments. However, enough of that.

The reason for this letter is John MacDonald's WINE OF THE DREAMERS. As I said before I read it last week and it's still in my mind. I can't describe to you the way it hit me. It was different, that's all I can say about it. I'm not taking anything away from the rest of the issue—but that one story to me is tops now and will be for a long time.

Now that this is off my chest I'll get back to my shell and stay there. Incidentally I think right now that your stf mags are the best on the market and I hope the others come up on a par with you. Please congratulate John MacDonald—987 Main Avenue, Passaic, New Jersey.

Thank you, sir—and we hope our succeeding lead novels hit you with equal and equally pleasant impact.

INSPIRED
by Edward L. Corton Jr.

Dear Editor: The May issue has inspired this letter, my first to you altho I have been reading STARTLING intermittently since the first issue. For the first time in the past two or three years of reading both SS and TWS, I have found a story to rave about. It's Wine of the Dreamers, by MacDonald, which hit me right in every way. It has the necessary science, suspense, action, drama, plot, satisfactory ending, etc.

In contrast to most of your lead stories, even those by van Vogt, this story kept on a high level from start to finish. It gave a very satisfactory exposition of the parallel-dimensions theory as well as providing a reasonable theory to account for some mental aberrations that are so prevalent today. Greater praise hath no novel.

Since you handle the readers' section for both magazines, I'll air another matter which really concerns TWS. Ever since Bradbury's short "The Naming of Names" was printed, I've been scanning TEV and TRS for comment exposing the basic fallacy of that story. Most of the time I like Bradbury, with "The Concrete Mixer" my favorite among stories printed in your magazines. But in "The Naming of Names" Bradbury went contrary to usual theories on semantics. To wit: the names of objects are phonetic symbols pinned to such objects by the people who come in contact with the objects by one of the five (or six) senses.

In other words, the name comes from the namer and not the namee. It is true that many names are suggested by the aspect of the object: e.g. Red River, Blue Ridge, Black Hills, The Badlands, red-headed woodpecker, etc. But note that a colored river will be Red River in English, Colorado in Spanish, etc. So Bradbury has no logic behind his idea that the Martian names for objects would come subconsciously to Terrestrials on Mars. He should read "Science and Sanity" by Korzybski. I have.

I have to disagree with your contention that science fiction and pseudo-science are, for all practical purposes, identical. As originally conceived, science fiction was to be the fictionalizing of future science as it could logically be foreseen from the present-day knowledge. As pure examples, we have Venus Equilateral, The World of A and, I believe, Wine of the Dreamers. Pseudo-science is hard to define but might include stories where the science is dragged in to transform an adventure story by addition of a future setting, a scene on another planet, etc. I include most of your stories among the pseudo-scientific efforts. Fantasy is fiction which is based on impossibilities, like "The Lady Was a Witch," to name a recent story, or the stories of A. Merritt.

Please discontinue the Captain Future stories. They never were any good, tho I bought the first nine issues. Quite juvenile.

Your letter sections are by far the most interesting part of the magazines, since practically all stories are disappointing because unconvincing. Time after time I have picked up your issues with anticipation and have started stories which read like masterpieces until one comes to the weak endings. "Fire in the Heavens" was one of these, which was so nearly good that the disappointment was greater. In looking back at my index of past issues, I find that I can't even remember what most of the stories were about —and that ain't good!

Another request: please discontinue the Hall of Fame. The stories weren't outstanding when first printed, so I can't be bothered to read them again. I'd rather read new stories. The exception will be Robot Nemesis, by E. E. Smith, which was printed in the tenth anniversary issue of TWS. That story was always good and stands out like a giant among the stories of pigmy value of that time.

As long as you can reprint long stories in FSQ, why not give us one of Otto Gail's masterpieces? Or "The Time Stream," by Taine? Or some from Air Wonder Stories?

I liked the Hogbens but not Oona and Jick or Magnus Ridolph. Series are difficult to write and to read, because the stories vary so much in worth. You should consolidate the two magazines and make one monthly magazine and then print serials. As a general rule, the longer the story the better it is.—709 West Third Street, Waterloo, Iowa.

We are dropping the Hall of Fame feature, as we believe we've said before. Sorry you find our stories disappointing but if we didn't run them what would our letter writers have to write about? As for the Hogbens, you may be interested to learn that Simon and Schuster is shortly bringing out a Kuttner anthology which will include all of them—to date, that is. We hope Henry the Great writes many more.

PROVOKING—THOUGHT, THAT IS
by Levin Shapiro

Dear Sir: I have been a reader for many years of ALL the science fiction magazines. I have found that the field, as a general whole, is an excellent source of thought provoking ideas. After reading the entire field a few magazines began to attract me more than others. I have found STARTLING to be one of those magazines.

While I enjoy the letters in the magazine as a whole, some of them make me slightly ill. I refer to the "rah rah," "Editor, Dear ol' Thing," "Dear Suh," correspondents. Science fiction is growing up. The eyes of more than a few old guard screwballs scan the pages of the various magazines and those who write those fourteen year old letters, both in age and science fiction age, should shut up or get out of the field, they are giving it a bad name.

I was overjoyed at your remarks about closing down the letter department if the fans insist on writing that tripe. It would be better to do so anyway. The advertising you need the letters you do not. They are an obsolete form of self praise.

I get sick of reading how good Joe Doaks thinks your magazine is. It doesn't impress the majority of the readers at all. When you no longer are any good we won't buy. And by the way you do run a flop once in a while as do all editors. I for one do not care how the rest of the fans list their choice for the best and the worst.

Spend the time in a better way for me by running an extra short short. If you are short on money to pay the writer of said short short, cut the filbert's wages that edits the pages devoted to the letters to the editor. He doesn't earn his keep anyway.—Sigma Chi, Williamette University, Salem, Oregon.

Well, bub, nobody makes anybody read them. And isn't Doak(e)s spelled with an e? Incidentally we are the only "filbert" connected with this editorial chore (we did not say "easy chore"). Must we fire ourself? It ain't logical, no matter how many readers wish it were so.

VALE
by Bob Farnham

Dear Editor: I am right in the middle of a terrific job of packing for the move to Georgia and this will be the last you hear of me for a while (did I hear some one yell THANK HEAVEN?) but after we are settled in the new home, I'll resume my NFFF activities and other didoes, including more letters to TEV and TRS (in TWS) and finish work on Project Startling Stories (a combination Stf-Ftsy, no less!) and then sit back and wait for that familiar little pink slip to come.

Oh well . . .

Had to take time out to tell you what a swell job you did on the May issue. WINE OF THE DREAMS (MacDonald) was good enough to rate HoF rating. I did not "catch" till after I had read almost half of the story but when I finally woke up it was worth it! Hamilton has gone Fantasy, I see, with Cap Future in CHILDREN OF THE SUN but it was good and that's about all. Hamilton simply cannot do a short and have it compare with his splendid long novels. Sure would like to see a long one. The long ones give him a chance to develop a tale and he doesn't have that chance in short stories.

How about another opus by La Brackett???? I got a whale of a laff out of THE HISTORIAN, by Jacobi. I think Carl made a slight error, though. Could it be that Lak Dhrow was really an Editor instead of an historian???

SUMMER WEAR, by de Camp must have been written in Chicago! The gals here wear darned few clothes but plenty of paint and calci—uh—uh—powder. Tell me—wot in Sam Hill is the objection to trimmed edges???—432 So. Spencer, Dalton, Ga., c/o King.

Glad you like WINO, Bob, and hope you enjoy your new home. As for la Brackett, you'll find her in both forthcoming SS's and TWS's at considerable length—a novelet for TWS and a lead novel later in the year for this magazine. Hope you don't miss your Chicago calcimes too much—but we hear the little ole gals down South do all right too.

AND AGAIN!
by Bob Hoskins

Dear Editor: You've done it again! WINE OF THE DREAMERS is one of the best stories yours truly has been fortunate to see since he first started reading the stf mags regularly a little over two years ago. Have MacDonald do some more novels. Just make sure that they are as good as WofD.

The highlight of the rest of the ish was page 143. On it you printed my letter. I'm a fan of yours for life or until Better Publications decides to stop publishing a line of pulps. Same thing goes for TWS.

A suggestion for the new quarterly on its tenth anniversary issue. Hamilton's "Through Invisible Barriers" which appeared in the October 1942 ish of TWS. I just got it a couple of weeks ago and passed a very pleasant evening with it. I never realized how fortunate I was to be born into stf reading after the demise of the late unlamented Sarge Saturn.

The only bad story in the current ish was Leiber's tale. "The Black Ewe" was very boring. You shoulda given it to Bradbury. Maybe I would have liked it if the two had collaborated.

A question—did Bond ever do any novels for you or any of your mags? If so, what issues did they appear in? I'm going to try to make a collection of old mags with Bond tales within. So far I have half a dozen of a competitor and the TWS with the Hamilton story mentioned above.

A warning—one of these days I'm going to shoot you a

manuscript. It'll probably be a real stinker.

Once again I want to say that I want penpals. Even if they aren't human. At the time my ambition is to contact at least one fan in each of the forty-eight states. I have a long way to go to do that at the time but I'm making progress.

I still think you're a coward for not printing your own name. What's the matter? You gotta inferiority complex or somethin'?—Lyons Falls, New York.

We'll take a look at the Hamilton opus you mention—but with FSQ rather than the HoF in mind, since the latter is now officially a moribund institution. As for Nelson Bond—yes, we ran quite a bit of his stuff—but never long stuff—in TWS and SS years ago. Actually he did a lot more for our sports magazines. The lad can really turn out football and baseball dumhingers, as well as Lobblies, of course.

FINISHED
by Ed Cox

Dear Editor: I've just finished reading the May 1950 issue of STARTLING STORIES. None of them were particularly "startling" but they were entertaining—and more.

Especially John D. MacDonald's "Wine of the Dreamers." A very competently woven novel. Involving such things, among others, the origin of Man (a favorite theme indeed), the first attempts at bridging space, an Arthur C. Clarke-ish far-future effect and some darned good writing.

I especially like MacDonald's ability to put on paper some of the atmosphere of our ordinary life. I mean, for example, in the first of the story, where Bard and Sharan stopped in the roadside place for drinks—and near the end, where he was building up to the climax of the ship's landing. In all of MacDonald's stories he has this pleasing ability. I'm glad to see him writing so much science-fiction. He can turn out a very good detective story too y'know.

"Signboard of Space" has indeed withstood the test of time, to borrow from the HoF blurb. Another explanation as to how Man got here. Also an explanation of the canals. Well, not really "explanations" but theories, ideas, etc. How would you like to sit down with a coupla thousand s-f magazines and index all of the various stories that tell of the origin of Man? (Fiendish of me, what?)

In Hamilton's Cap Future story, while it is not the main theme, the race of Man has yet another source, that of the Elder race as told about in the early CF novels. There is a lot of argument about the advisability of running these CF novelets. Here's my three-cents (1c tax)—while the readers of SS are supposed to be "above" semi-juvenile space-opera, to hear some of them rant, didn't anybody think of the fact that even though the readers who were in their teens when they first read CF Magazine may be supposedly out of this type of reading-habit, that there is a new generation of teen-agers who might find CF more to their taste than "Wine of the Dreamers" or some van Vogtian epic?

As they once did others may find CF quite entertaining, even thrilling, before discovering that while they mature, their ability to grasp more complicated plots and complex theories grows. So let's not sneer and deride the CF stories and those who happen to like them. After all, the youngsters who happen to discover CFuture in SS may be the future group of readers of SS, TWS and others in this line of magazines.

Not the readership, but some of it. Anyhow, if enough like this series, it'll continue. And the editors will be justified in running it. Let me add my compliments to Hamilton's fine story-weaving. I'd rather see full-length Cap Future stories though.

Fritz Leiber, Jr., has re-entered the field of late I notice and this short is typical, I think. Well wound-up little yarn.

When looking over the line-up of authors this time, one would feel that ya just can't miss with whichever yarn you read. Well, you can't, almost. De Camp's new series is both pleasurable and just a bit repelling, this latter in spots. He should drop the foreign phrases for one thing. We know he knows it. And another is that his stuff has lost its former fire and life. Otherwise, he'd have a good series here. Just my lone opinion.

Carl Jacobi is back too! Well, not that he's been gone, for he is unpretentious and writes unobtrusively. That is, no great hulabahloo (my own spelling) over any one of his stories, but they are good. This little item shows just how good he can be. Neat eh? Wonder why no one else has ever thought of this little idea?

Well, now to defend myself against possible attacks by outraged and offended Ph.D.'s. The whole result from the various letters published in the January 1550 SS, mine included, against Ph.D.'s would seem to indicate that people thought the various letter-writers were down on the people merely because they had attained those letters. At least, some of the reactions to my letter seemed to indicate that.

Lemme elucidate please—I, for one, do not consider men with Ph.D.'s, L.L.D.'s etc. My complaint is that a few of these people let those letters elevate their ego and expand their hat-size. And these certain ones sometimes like to pounce on readers and letter-writers of science-fiction magazines.

Granted that they have as much right to write as we have, but no need to condemn our right to write because of what we write. Like the people who will listen to nothing but the classical music, suffering or otherwise, because of their position in society. Okay, let 'em, but when they trod on people's tastes for Dixieland, swing, bop, progressive jazz, etc., then there is war. Same trouble.

I hope that clears up a few points regarding the current anti-Ph.D. wave, which was partly inspired by my Jan50SS letter.

Nice to see Orban's pics around again (although he shoulda left the antennae off of Otho's back) nice to have a Hamilton novel coming up. Where's Brackett? We need, by the way, some new and fresh blood in the art department. Stevens is getting careless. Or something. Until next issue then, or rather the June TWS, I'll be patiently awaiting something, which, when it arrives, I'll hasten to use on you. Be warned—you started it! Enigmatic, eh?—4 Spring Street, Lubec, Maine.

And just exactly what is an "enigmatic, eh"? We remain sorely baffled, Ed. But our chief response to you is in the matter of specialized authors. You, like several of your predecessors in this column, express surprise that John D MacDonald is able to write both detective fiction and stf. This is a type of reader-ego which we have encountered all too frequently in the past half dozen years but have never hitherto taken trouble to answer.

A good writer can write in all fields—from belles lettres to newspaperese—in or out of rhyme and meter as the occasion or mood demands. We ourselves at various times have written (and sold) science fiction, detective novels, historical novels, free and rhymed verse, love stories, sports fiction stories, slick and pulp magazine articles and stories, adventure stories and heaven only knows what-all. We have drawn portraits for cash and done murals for New York night clubs. In short, we have been around a trifle.

This idea that science fiction is something special and apart is utterly absurd. It isn't—although Allah alone knows it does have its special and stimulating qualities. But a professional writer can and usually will write anything and everything that comes into his mind in story form. Ask one about it some time.

RATHER!
by Tod Johnston

Dear Sir: Rather good, RATHER good—that's the thing to say about the May 1950 issue of STARTLING STORIES. John D. MacDonald's first novel-length yarn was quite up to the high standards he has set in his shorter stories and I very definitely look forward to seeing more from this author.

The theme of the story itself has been used in many other places and in many different manners but the story does not suffer from this. He has delved way into the realms of improbability in making Raul and Leesa the soulmates for Sharan and Bard but we will accept that for it is a welcome change—when I started the story I immediately expected

Bard and Sharan to wind up in each other's arms but I was pleasantly surprised.

Just one small point—on page 78 the change from Brad in the asylum to Bard the National Hero seemed rather abrupt. Was this the way MacDonald wrote it or did you have your "Little Blue Pencil" in there somewhere?

"Signboard of Space" I read many years ago and having no desire to spoil the illusion by rereading it—I left it unread.

The same applies to "Children of the Sun"—CF was very good ten years ago but I have "aged" since them.

Fritz Leiber, Jr., seemed to be trying to say something important but he got so tied up in the story that it almost didn't make sense. There was definitely an idea to the story but the treatment of this idea was not good. This is quite unusual for Leiber—he is normally an idea writer but he left so much unexplained in "The Black Ewe" that I feel he completely wasted the idea.

"Summer Wear" is the usual de Camp—not too good but not too bad. Once you have read a few of his stories you have read them all!

"The Historian" by Jacobi was a very old idea reworked to make an innocuous little filler.

From the sounds of all the foregoing you may gather that in my opinion the only thing that makes the May 1950 SS rather good is the lead novel. The balance is very definitely mediocre. For the sake of comparison let us go back ten years—back to the May 1940 issue—and see just what you offered your readers then.

To touch on the exterior of the mag first we have a superb painting by Howard Brown depicting a scene from the lead novel "Twice in Time" by Manly Wade Wellman. Finlay, Paul, Wesso—what an art staff! Finlay's illus for "Twice in Time" are some of the best he has ever done for you. Although Stevens does very fine work one does get a little tired of seeing nothing but half-clothed women all the time.

The lead story was a beauty. Possibly the best Wellman did for you in the early years. "Strangers on the Heights" is my nomination for the best he has ever done for you with this as second choice. The idea was good and he must have done considerable research to make the setting so authentic.

With the exception of the Hall of Fame novelet, "Valley of Dreams" by Stanley G. Weinbaum, the balance of the issue was not good. V. of D. was as good in its reprinted form as it was many years ago when it first appeared as the much requested sequel to Weinbaum's most famous story, "A Martian Odyssey."

Eight departments including a crossword puzzle swelled the issue to 130 pages but The Ether Vibrates contained only six letters, the writers of which, with the exception of D. B. Thompson, have dropped out of sight.

The review of fan publication lists two fanmags that are now recognized as being of classic stature. Remember "Spaceways" and "Stardust"?

All in all though, the passage of ten years has not done too much to SS. It has had its ups and downs, its classics and its hack, but all in all it has managed to maintain a reasonably high level of entertaining fiction throughout its eleven years of existence.

I hope you enjoyed our little reminiscing, people, and watch for our comparison of "The City at World's End" with "Five Steps to Tomorrow!"—P.O. Box No. 32, Postal Station R, Toronto 17, Ontario.

Or SEVEN FOOTSTEPS TO SATAN in five easy lessons, Tod. From Adam La Zonga, of course, Dogpatch style.

Seriously, little could have happened to SS over the years—since its policy has never changed. We have merely sought the best stf novels available—plus a goodly filling of shorter fiction to round out the book. So naturally we sink or swim on each reader's opinion of that big job. Incidentally we agree about the MWW STRANGERS ON THE HEIGHTS. One of the better stf jobs in our experience.

FOR WHAT REASON?
by Eugene de Weese

Dear Editor: OK, you're forgiven.

Well, for some unknown reason, here I am again—maybe. I will refrain from making unfavorable comments on your artwork, except for this one, which I cannot let get by. Why is Simon Wright's picture upside down? Looking back through the old CF's I find that there were a couple similar cases then.

In regard to the Captain Future stories, I admit I was a bit over-enthusiastic in my last letter, mainly because at the time I had read only three of his novels (COMET KINGS, PLANETS IN PERIL and SOLAR INVASION). Since then I have acquired a nearly complete set of CF's and having read the first few issues, where he was portrayed as a super-detective, I can see why it had such a short career.

But, even though the great CF was somewhat of a flop as a detective he was still going great guns as an adventurer, as in PLANETS IN PERIL. The trouble, it seems, was that Hamilton could carry the hero through countless wonderful adventures but he could not conceive of a complicated enough plot to take him through a futuristic detective story.

But in these shorter length stories appearing in SS, which seem to be predominantly adventure, CF and Hamilton have hit the old high which impressed me so greatly in the aforementioned PLANETS IN PERIL. I won't insist on CF novels this time, but how about at least one novelet in each ish of SS.

May I congratulate you here and now for the appearance of WONDER STORY ANNUAL? Just one thing puzzles me about it. THE ETERNAL MAN by D. D. Sharp appears there in a very elongated form. In one of my bound anthologies, TREASURY OF S-F, it also puts in an appearance. And there the story is complete at the end of the first chapter of the magazine version. Now what I would like to know is, did Sharp lengthen it specially for publication in WSA, or was it cut short for the book?

And I'm always glad to see something by Eando Binder, so, considering, as well, the novel, ONSLAUGHT FROM RIGEL, which looks very good after reading the first couple chapters, WSA looks like a very welcome addition to the reprint field. And hooray for you—it has trimmed edges, the first large-size mag that, to my knowledge, has.

When I saw that little "masterpiece," by Lin Carter, I thought for a minute that one of the Kennedys had put in an appearance. But unfortunately they hadn't.

Now, to the issue at hand. First, the lead novel, WINE OF THE DREAMERS by John D. MacDonald, was wonderful. For some reason, probably the idea of living one's entire life in one building and knowing of no else, it reminded me strongly of Arthur C. Clarke's classic of a little over a year ago, AGAINST THE FALL OF NIGHT. It may be MacDonald's first stf novel but it is a great one.

Ah-ha, I see you are going to have an E. E. Smith classic up for reprint next time. Now that is good news to me. Incidentally, how about reprinting some of his stories in one of your two new reprint magazines? His space opera is just my meat. Love every word!

And speaking of requests, where is Orig Prem? When is he again going to set up hot dog and hamburger stands in Ancient Egypt? I miss the lovable old soul, robot that he is.

Well, a Hall of Fame selection that actually is a classic. To put it mildly, it was a masterpiece. I always have liked those "ancient mystery solved" type of stories, and this was one of the best I have seen for a long time.

I'll skip CHILDREN OF THE SUN as we all know that since it was a CF story, it was wonderful.

BLACK EWE was sure a weird little gem. Gave me the shivers. Best of the short stories. Without using another paragraph, I'll say that de Camp's story was, as is usual for him, good. This is the second of the Osirian stories I've seen. No comment on HISTORIAN. Too short and not much plot.

Now let me get down to business. Ever since I heard of Olaf Stapledon's LAST AND FIRST MEN and the sequel, STARMAKERS, I have been quietly drooling over the possibility of getting my paws on them. But it seems that the only person I know of who has a copy of them, won't lend to anyone too far away. So, does anyone (editor, you're included) have these? And would they be willing to either sell or loan? I would prefer to buy but a loan would be all right. Anybody? Huh?

I close gracefully and tactfully by saying that the May SS was the best since November '48. And I mean it too.—Rochester, Indiana.

We don't know how the edges got trimmed on WSA but we suspect it was all a ghastly mistake. Forgive us, please—we shall do our utmost to avoid a recurrence.

Glad you liked our May issue, 'Gene. November, '48, was a real good edition, as was its immediate September predecessor. Wish we could always come up with novels as good as Fredric Brown's WHAT MAD UNIVERSE and Arthur C. Clarke's AGAINST THE FALL OF NIGHT. They were honeys.

Let's see—the September, '48, issue included a P. Schuyler Miller Hall of Fame

novelet, TETRAHEDRA OF SPACE, RAT RACE by the de Courcys, SHENADUN by John D. MacDonald and SANATORIS SHORT-CUT, second in the Magnus Ridolph series. There was also an article by Bob Farnsworth of Chicago Rocket Society fame.

In November, outside of the fine Clarke novel, we had Festus Pragnell's THE ISOTOPE MEN for the Hall of Fame novelet and six shorts, THE STUBBORN MEN by Robert Moore Williams, HUMPTY DUMPTY HAD A GREAT FALL by Frank Belknap Long, DORMANT by A. E. van Vogt, RING AROUND THE REDHEAD by John D. MacDonald, THE VISITOR by Ray Bradbury and THE UNSPEAKABLE McINCH by Jack Vance, another Magnus Ridolph opus. We also inaugurated that SCIENCE FICTION BOOKSHELF in that issue.

Clarke, Long, Williams, Bradbury, Vance, van Vogt and Pragnell—come to think of it that was quite an all-star cast. Only Kuttner missing—which is something he seldom does. We're grateful that you find the May, '50, issue on a level with it.

But let's see—novel by Hamilton (and a darned good one), novelets by Leigh Brackett (also slightly terrific) and Dr. E. E. Smith (HoF reprint). Shorts by Jack Vance, Bradbury, Walt Sheldon, F. B. Long and William Morrison. That's not such a bad lineup either. Well, we keep pitching and try to keep our authors doing ditto. So our success is scarcely unmerited.

HEARTY ONE!
by David M. Campbell

Dear Editor: Please accept my heartiest congratulations. When you printed Edmond Hamilton's wonderful story, "Children of the Sun" you gave us unworthy readers one of the finest science-fiction stories ever printed in STARTLING STORIES.

Edmond Hamilton has always been and shall always continue to be one of the all-time "greats" of science-fiction writing. He can take the ordinary action story and lift it onto the level of an epic. His novels especially show his ability. He kept the CF series a running group of good stories and it wasn't until other authors started mishandling this series that CF degenerated into a juvenile comic-book hero.

"Children of the Sun" is the best Captain Future tale I have ever read. For many years fans have always had this feeling of "I've been here before" about the kind of fiction that used to thrill them when they first started reading it. Now here is a story that is something new and when you try to picture the vast glory that Hamilton writes so wonderfully about you can't help but feel awed and full of wonder.

It was a terrific emotional experience, and when the story ends leaving Curt with the feeling of longing, the reader feels it too. I didn't want the story to end. I was enraptured for page after page.

Somehow I can't make up my mind to admire Curt or Carlin. The sun held for both of them just about a perfect paradise. Was it right for Carlin to forget the rest of his existence, to throw off all memories of humanity, or was Curt giving up something fine and wonderful by returning to the responsibilities of reality?

It seems to be the same problem as in "The Lion of Comarre" by Arthur Clarke. I know for my part, I'd never leave an existence like that. Maybe you have to admire Curt for that or was he just being foolishly idealistic?

Anyway, it was a superb story and thanks a billion for printing it, and barrels of orchids to Ed Hamilton for writing it.—418 High Street, Closter, New Jersey.

Enrapture, enshmapture—y o u really seem to have them bad—or badly, in reverence to our New England bringing up. Wish more of our readers were ditto.

HOW CORNY?
by Thomas Reamy

Dear Editor: This letter may be a little late, but here goes—on the whole the ish was very good. I think WINE OF THE DREAMERS was the best story in the magazine. Who was the hero? Bard Lane or Raul Kinson? Oh well, it doesn't matter. This story would make a good movie.

SIGNBOARD OF SPACE rated second. Stories about dead worlds are my favorites. Signboard would also make a good movie (movie crazy!).

CHILDREN OF THE SUN is third best. I wish Ed Hamilton would write a lead novel about Captain Future. What happened to Joan Randall? Maybe she couldn't stand the heat? Let's have her back next time.

SUMMER WEAR is next. The story was good but HOW CORNY CAN YOU GET?

THE HISTORIAN was O.K., but the illustration gave the story away.

THE BLACK EWE??? I suppose Lavinia was supposed to represent the black ewe leading the sheep to the slaughter house, only she lead people? The story was very poor.

There's one question I'd like to ask. What's a BEM? Answer please! I hope I'm sending this letter to the right address.

AS for the ETHERGRAMS I think Marion Zimmer Bradley's letter was the best. I agree with her.—Rt. 6, Box 377A, San Antonio, Texas.

Shall we tell him, fellows? Or would you like to do it for us? For your confidential file, Tom, a BEM is a Baggy Eared Membrane, usually snipped with a pair of manicure scissors from the end of a second-hand umbilical cord. If you use an old razor blade it doesn't count.

TIME TO WRITE
by Jack Manix

Dear Editor: Last night, after finishing the May ish of SS, I felt it was about time to write. It was about the summer of 1943 I believe, that someone gave me several copies of SS and TWS. The lead novel in one was about a meek little bank clerk who tried to smash the world. Since then my appetite for sf has increased. I am a frosh at Tampa U., working toward a degree in education.

I thought this ish was very good. "Wine of the Dreamers" leads the pack. I liked the realism of the news flashes at the beginning. Unfortunately the idea of the dreamers has been used often in recent months. The ending tapered off nicely, not like vV's "Shadow Men."

HoF was better than usual. All the shorts were good. The illus gave the "Historian" away however. I didn't like Cap Future—it seemed hack. I started reading sf in the last days of the oldtime space opera. I got only a few CFs but he was my favorite. I have kept pace with the change in sf although a good space opera still appeals to me. Now, have I changed or has CF changed?

The format was good this time too. A very long novel and a novelet or a long novel and a couple of shorts would suit me best, but I realize this would be hard to manage every month. This is better than the rash of shorts you had when the size was first increased. Of course some plots can only be used in short story form. I do hate to see a good plot or idea or characterization wasted on a short. Makes me feel as though I had been cheated.

Why not get some more novels by A. C. Clarke, Kuttner, de Camp, Rog Phillips? Have you ever had Phillips; I can't remember but he is good? Can you tell me if Phillips and Don Wilcox are the same? Whether or not, he is another good writer though more fantasy than sf. Nothing wrong with fantasy though.

Well I have much more to say but I can't judge whether this is too long or not. Guess you will have to print it so I can tell in the future for I intend to write again.—6713 13th St., Tampa 4, Florida.

What have short stories ever done to you to merit such widespread condemnation?

Tsk, tsk! Wish the authors you list would break out in a rash of good long stories—or even short ones. Messrs. Graham-Phillips and Wilcox are definitely not the same individual. We know them both. As for you, both stf and you have changed.

BEST OVERALL
by Bob Silverberg

Dear Editor: The May, 1950, issue of STARTLING STORIES was one of the best overall issues of your magazine that I can remember! I say this not to get my letter printed—Lord knows, it's no novelty to me any more—but as a compliment to you. I'll start at the beginning and comment right through:

First: the cover. I shall comment no more on Bergey's paintings—once you've seen one you've seen them all. Editorial, good. Art ditto though Finlay is sadly missed. Stevens' work on the first story left me drooling. Finlay did fine work on the WONDER STORY ANNUAL (for which, much, much thanks). I really appreciated the Annual, though I had read some of the stories, in the original WONDER. Wasn't THE ETERNAL MAN rewritten? It differs a lot from the version that appeared in the August, 1929, SCIENCE WONDER. Check this, please!

WINE OF THE DREAMERS was great, all that you said it would be! I even liked the title. I've never read a better MacDonald story—in fact, I think it rates the list of top ten STARTLING novels, along with these—First—THE BLACK FLAME. The first novel and first on the list. Second—it gets tougher from here down. AGAINST THE FALL OF NIGHT gets the nod here, by a slight whisker over

CITY OF GLASS, one of the finest I've ever read by Loomis. In fourth place is its sequel, IRON MEN, which appeared three years later. After this, in fifth place, possibly too high, I put WINE OF THE DREAMERS with FLIGHT INTO YESTERDAY, THE DARK WORLD, the early John Carstairs novels (ETHER ROBOTS, et al.), THE PORTAL IN THE PICTURE and, tied for tenth, the Captain Future group, bringing up the rear. How do you pick 'em?

If CHILDREN OF THE SUN had been novel-length, it would unquestionably be the best of all the Cap Future stories I've read except possibly the Deneb stories. I've read twelve or thirteen in this series, including about eight in CAPTAIN FUTURE MAGAZINE but very rarely has Hamilton or his motley successors abandoned cops-'n-robbers for real WRITING—which was what the latest story was. Let's have a book-length Cap Future as of old early in '51.

THE CITY AT WORLD'S END sounds good—I hope I'm not disappointed. The shorts weren't bad either. I'm glad that de Camp is contributing to you again. Ditto Leiber. Both their stories were below par for those two but still very good. THE HISTORIAN would have made a fine fanzine story but it was a bit hollow in SS. And now, we swing to the letter column.

I thank you, sir, for printing my letter. Oh, one more thing, before I forget it—I usually don't comment on typographical errors, for they're tough to weed out, but you really had a few howlers in the last issue: as an example, Hamilton's "irrevelantly" on page 107. IRRELEVANTLY, man, IRRELEVANTLY! Now for the letters again: I note Morton Paley recommends the first Cap Future story for the HoF. Morton, that story (CAPTAIN FUTURE AND THE SPACE EMPEROR) was about 90 pages long—in CF, Winter '40. Unless you use .002 pica type, it's going to be a mighty long HoF.

I do get a bit tired of the endless re-introduction after the characters—I know them so well after the twelfth time that I could write a CF story myself—so why don't you revive that handy little column, THE FUTUREMEN, for use when CF appears? And—what does the headline JAMBALAYA mean above my letter? Mebbe I'm thickskulled but me no get. I have a dandy Ph.D. joke, but I'll stow it for future reference.

And now—as yellow tongues of lightning lick across the black, ominous heavens, we turn the page to the Fanzine review. Oh, how could you do it!!! Another B-listing for SPACESHIP! This time I think you're wrong. Spaceship No. 5, which sold (as all issues do) for a nickel, was worthy of, at least, a B-and-a-half rating. How about introducing a B-plus list? It's a pity that fanzines don't run promag listings. Oh, what I'd do to you!

"STARTLING is definitely improving—it moved up to the D-list with the last issue." Oh, well—maybe you'll give SPACESHIP a "Frying-Pan" panning—at least I'll sell a few copies to people looking for laughs. Boo hoo. Let's not go monthly just yet. I like the present arrangement.

If WONDER STORY ANNUAL were quarterly, though, you'd have nothing but thanks from me. I hope you have many more of these in years to come.—760 Montgomery Street, Brooklyn 13, New York.

We meant to explain THE ETERNAL MAN business earlier—but better late than ever, kids. Actually we took both ETERNAL MAN STORIES from the old WONDER STORIES, made the first one the opening chapter to the whole business and came up with an amalgamette. We thought it right cute of us.

Praise merciful heaven there are no listings for promags. Meanwhile keep SPACESHIP down where it belongs. We're thinking of creating a C-list, so beware. Prospects for lengthier CF yarns look unpromising from here, alack.

WHO'S A CLASSIC?
by Frank F. Groves

Dear Editor: Since you have published a classic (I use the term advisedly) I shall write you and let you know of aforementioned fact. What am I raving about? Why naturally, "Wine of the Dreamers" in the May ish of STARTLING. I like the thing. It isn't just a good story, it would be a classic if you considered it only as that, but the ideas put forth make it superb.

The ideas of the "controls" being responsible for the insane actions and ideas prevalent today all over the world is, to say the least, thought provoking. When one reads the newspapers, listens to the radio, etc., etc., talks to people about the things going on today, one can easily imagine something like the dreamers being in action. Something must be influencing the people of the world to make them do and say and believe the things that have turned this poor Earth into such a disgusting mess.

Look around at the world. People lying, cheating, stealing, killing and in general acting as if they never heard of decency, civility and brotherly love (Man, how that one takes a beating). Oh, well . . . (This sermon doesn't cost you anything, I'm just tossing it in free.)

As for the rest of the mag HoF is O.K. CF and his merry men could have been good if they hadn't been CF and his merry men. Yes, I don't like him. "The Black Ewe" seems a little off focus, and rather amateurish. "Summer Wear." bah! "The Historian" I like, but it was a little too brief.

The fen are up to their usual in TEV and by the way don't cut TEV down or out, in spite of some of the comments by various schmoes that it should be. (Does that sentence make sense?) As "Room" (the German meaning) says, let's have some more Hogben.

Just for fun would you ask de Camp why Brazilo-Portuguese should be the language of the spaceways? Doesn't make sense to me, but maybe he has a reason for making it so in "Summer Wear." By the way, I didn't say that this story wasn't worthy of de Camp, but I shall correct that omission. It isn't worthy of de Camp.

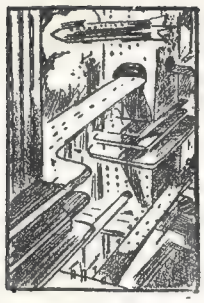
What does the little A. N. C. up at the top of the cover mean? I've often wondered and should probably know, but I'm asking, anyway.—605 West Oak, Carbondale, Ill.

You ask de Camp—we're too tired, Frank. As for A.N.C.—that implies Asiatic Nurses Corps though some scandal mongers insist on calling it the American News Company. We don't know whether to thank you or not for supporting our readers' columns. They're mighty heavy to lug around at times.

YOU WIN THAT ONE!
by Joe Pygman

Dear Editor:: Hah, hah! Betcha get a lot of letters about your Tin Woodman who was not dancer Bolger but comedian Jack Haley. Ray Bolger played the brainless scarecrow and did an excellent job. We all make mistakes I know but I feel sorry for you. You'll get reminded of it every time you open a letter. Unfair of course but it makes man feel good to criticize someone he considers better than him. The last sentence was a little apple polisher but is true in most cases. Maybe yours is an exception to the rule. That balances things up.

(Continued on page 160)



REVIEW OF THE CURRENT SCIENCE FICTION FAN PUBLICATIONS

WE have just received our booklet anent the Eighth World Science Fiction Convention, otherwise the NORWESCON, to be held this September 1, 2, 3, and 4 (Labor Day Weekend) in American Legion Hall, 1139 S.W. 13th Avenue, Portland, Oregon.

If you want such a booklet, which lists everything from convention programing to hotel accommodations and how to get to Portland in time, send one dollar to NORWESCON, P.O. Box No. 8517, Portland 7, Oregon, and do it now. This will make you a member of the Norwescon along with some 1,500 other fans and will get you properly listed—as well as get you the booklet. You might also send in another dollar for your Banquet ticket if you plan to attend.

The convention, as usual, will be the annual highlight of stfan activity—and this one holds ever promise of being one of the mightiest and most enjoyable ever flung. If you go you'll meet a lot of people you've been wanting to see.

Claude Plum, Jr., 526 Ellis Street, San Francisco 9, California, writes in to tell us that he is endeavoring to make up a listing of every fanzine published in the years 1947-48-49 and as such is seeking cooperation from fen who published same. You might drop him the numbers and names of the 'zines you published in those years if you are interested in such a record.

The A-List

Which completes the preliminaries. They are brief this time because the reviews to come are many. Let us away to the A-list, which opens in the usual alphabetical style with—

ALTAIR, 4 Spring Street, Lubec, Maine. Editor, Ed Cox. Published quarterly. No price listed.

A neophyte, no less, and a neat-looking one to boot. Harry Warner Jr. opens the text by giving us an interplanetary music lesson, following an editorial of fannish glee over atomic weapons—and both items make good sense and good reading. In fact, look for more of the latter in THE FRYING PAN, come October. Dave Thomas finds a number of sad holes in the Lovecraft legend on essaying again to read the works of the alleged horror-master, Isabelle Diniwiddie emerges with a brief bit of verse about a dolphin (something fishy here), Philip Gray chews over the entire stfield, Woolston has more verse and Art Rapp analyzes the genus fan with a dab of acid. Good stimulating issue—keep it up.

ETAOIN SHRDLU, 40 West 77th Street, Apt 2F, New York 24, New York. Editor, Steve Taller. Published bi-monthly. 10c per issue, 3 copies 25c.

Etty has blossomed amazingly in this edition, running to 28 pages and including much about Mr. John W. Campbell, Jr., and his and Mr. Hubbard's amazing Dianetics. Starring, however, is none other than Ray Bradbury, who attempts to explain the excretive process by which a writer gets ideas and gets them onto paper. This last makes it a must for 'zinecollectors.

THE FANSCIENT, 3435 NE 38th Avenue, Portland 13, Oregon. Editor, Donald B. Day. Published quarterly. 25c per issue, 6 copies $1.00.

The finest of fanzines is still the class of the field in just about every element, from artwork to copy. Darrell Richardson has a long and interesting lead article on J. Allen St. John, the mighty Tarzan illustrator, Ken Slater discusses briefly "strangers on the heights" and Thyril Ladd takes us into subterranean cave-worlds. Ted Sturgeon is the subject of self-profiling in the author section of a well-packed little booklet. Worth two bits.

FANTASY ADVERTISER, 1745 Kenneth Road, Glendale 1, California. Editor, RAS. Published bi-monthly. 6 issues 75c.

This top trade-zine is holding up well without Willmorth at the reins. Reviews and artwork are of high quality and the essays—on Lovecraft by Lin Carter and on Thomas Burke by Malcolm Ferguson—are fine.

FANTASY TIMES, 137-03 32nd Avenue, Flushing, New York. Editor, James V. Taurasi. Published twice monthly. 10c per copy.

This best and most frequent newzine in fanzine history continues to bloom. Recent issue reflects enterprise and plain good reporting in feature after feature of interest to professionals as well as amateurs of stf.

THE JOURNAL OF SPACE FLIGHT & Rocket News Letter, 10630 South St. Louis Avenue, Chicago 43, Illinois. Editor, Wayne Proell. Published monthly. 25c per issue.

Editor Proell and his aides continue to make this magazine just what the Chicago Rocket Society ordered. And his technical articles on the how, when and why of interplanetary travel should be of general fan interest.

MEZRAB, P.O. Box No. 298, Tahoka, Texas. Editors, Marion E. Z. & Robert A. Bradley. Published quarterly. No price listed.

The connubial successor to "Astra's Tower" which bears the initials of both Bradleys as its title. It is lively, opinionated, controversial and generally good unclean fun. From R.A.B.'s opening stare "directly into the voracious mouth of an overwhelming dilemma: how to go about composing and publishing a fanzine that is both entertainingly fantastic and thought-provokingly scientific" to his wife's sign-off with "Address all orchids to the Junior Editor; all brickbats should be flung at the Senior's head," the conflict rages. So far it is more entertainingly fantastic than thought-provokingly you-know-what!

THE NATIONAL FANTASY FAN, 2120 Bay Street, Saginaw, Michigan. Editor, Arthur H. Rapp. Published bi-monthly. No price listed.

Another official organ and a big one, this is generally

packed with information needed by members of the National Fantasy Fan Federation. Nice job.

OPERATION FANTAST, 13 G.P. R.P.C., B.A.O.R., 23, c/o G.P.O., England. Editor, Captain K. F. Slater. Published quarterly. 15c per issue, 6 copies 75c.

Dr. David H. Keeler has the major spot in this lively issue with an essay on "Titas Groan" by Mervyn Peake. Editor Slater's chatter page is amusing and informative as always and the whole issue is well up to par. He also comes up with a prozine swap scheme for British readers that merits your getting in touch with him pronto.

ORB, 811 9th Street, Greeley, Colorado. Editor, Bob Johnson. Published bi-monthly. 15c per issue, three copies 40c.

Wild and woolly and packed with log-rolling items by other fangroups and 'zines, to say nothing of stills from the Wizard of Oz. But withal it has a meed of patchwork interest.

PACIFIC ROCKETS, 1130 Fair Oaks Avenue, South Pasadena, California. Editor, E. G. Ewing. Published quarterly. $2.00 per annum.

Still tops of American rocketzines by a wide margin. Fine historical features, to say nothing of records of present guided-missile experiments and study of what lies ahead. Good artwork and we were a sucker somehow for the amateurish gag on page 32. It killed us.

PEON, 645-B Gibbs Avenue, Alameda, California. Editor, Charles Lee Riddle, PN1, USN. Published bi-monthly. 15c per issue, 12 copies $1.00 to NFFF members.

Neat Navy fun with strong letter column, generally weak fiction and a pair of pleasantly macabre poems by Henry Ackerman. Could stand more meat.

RHODOMAGNETIC DIGEST, 2524 Telegraph Avenue, Berkeley 4, California. Editor, George Blumenson. Published monthly. 20c per issue.

A fairly definitive recording and discussion of the flying discs by Don L. Fabun takes up much of the issue at hand. Also eye-catching were H. T. Gordon's "Man and Superman" and the unsigned consideration of Messrs Bradbury and Stapledon. This is still far and away the most adult thing in the field

SCIENCE FICTION NEWS LETTER, P.O. Box No. 260, Bloomington, Illinois. Editor, Bob Tucker. Published bi-monthly. No price listed.

The erstwhile Bloomington News Letter continues to bloom even without the bloomington in its title. Good gossip, pro and fan, good reviews, good makeup and printing. For which, both a huz and a zah!

SHIVERS, 230 Prince Street, Bridgeport 8, Connecticut. Editor, H. S. Weatherby, HM1, USN. Published quarterly. 10c per issue.

Most verse of varying degree by Herman King, Henry Ackerman, Arline Doane, Al Toth, Jack Cuthbert and others. Also a short story and a "novelet"—this by Bob Johnson—whose title, "Poltergeist in His Pants," threw us for a total loss. Sprightly enough for the A-list—but just barely.

SIRIUS, 1308 Hoe Avenue, Bronx 59, New York. Editor, Stan Serxner. Published irregularly. No price listed.

Another neophyte—with ghastly artwork. We don't quite know why we gave this an A-rating on examining it more closely. In fact, consider it demoted.

SOUTHERN FANDOM, 2703 Camp Street, New Orleans 13, Louisiana. Editor, Harry B. Moore. Published bi-monthly. 10c per issue.

The editor's belated Torcon report takes up most of this issue—and is colloquially amusing. And there is this Pong business for those that like it. A neat but not outstanding job.

SPACE MAGAZINE, 621 Third Street NW, Washington 1, D. C. Editor, Clyde T. Hanback. Published quarterly. 25c per issue.

A snappy-looking little newcomer whose fact material looks a lot more promising than its fiction—but isn't this true of all fanzines? Corralling of such by-lines as John Campbell, Harrison Smith and Milton Cronenberg in the inaugural issue was not kept up in the second edition. Too bad.

SPACEWARP, 2120 Bay Street, Saginaw, Michigan. Editor, Arthur H. Rapp. Published monthly. 15c per copy, 2 copies 25c, etc.

This biggest of fanzine monthlies continues to roll along nicely—with the most recent edition at hand featuring a hot article by Bob Tucker as well as such fluent regulars as Carl Lawrence, Ray Nelson, Wilkie Conner and Redd Boggs. A high level, well maintained.

UTOPIAN, 111 South 15th Street, Corsicana, Texas. Editor, R. J. Banks Jr. Published irregularly. No price listed.

An "interview" with Rog Phillips (Graham) is lead feature in this edition of a recently moribund 'zine. Otherwise Editor Banks has stuffed it with his own fiction save for an item by Michael Varady. Just fair to piddling.

STF TRADER, 1028 3rd Avenue South, Moorhead, Minnesota. Editor, K. Martin Carlson. Published bi-monthly. No price listed.

Another fat one for stf swappers. This old timer rates with FANTASY ADVERTISER as a necessity for those who like to keep their libraries circulating, sometimes at a profit.

The B-List

And in all a good average A-list. So now let's get at its underside, otherwise the B-list. To begin the firing we open up on—

AD-O-ZINE, 2058 East Atlantic Street, Philadelphia 34, Pennsylvania. Editor, W. C. Butts. Published monthly. No price listed. Probably gives you less for no money than anything else on the fanmarket.

THE DETROIT STFAN, 5037 Maplewood Avenue, Detroit 4, Michigan. Editor, Edith Furcsik. Published tri-weekly. 5c per issue. Just what it sounds like—capers of the Detroit gang. Not up to general listing as yet.

THE EXPLORER, Girard, Pennsylvania. Editor, Ed. Noble, Jr. Published irregularly. No price listed. A letterzine all the way and far from a bad one.

FAN-FARE, 119 Ward Road, North Tonawanda, New York. Editor, W. Paul Ganley. Published bi-monthly. 15c per copy. Printing much improved but fiction-contents still terrible. Might make A-listing soon if latter perks up.

ODD, 1302 Lester Street, Poplar Bluff, Missouri. Editor, Duggie Fisher, Jr. Published bi-monthly. No price listed. Some laughs in the study of stfen treatment of prozines but generally pretty juvenile.

PRO-CARD, 760 Montgomery Street, Brooklyn 13, New York. Editor, Bob Silverberg. Published weekly. 4 copies 10c. Unpretentious little cardzine that seems to be moribund at present, alack.

SCIENCE-FICTION WEEKLY, 1980 East 8th Avenue, Brooklyn 23, New York. Editor, Ronald Friedman. Published weekly. 5c per copy, 26 issues, $100. A new-born rival for FANTASY TIMES that is showing remarkable signs of life.

SPACESHIP, 760 Montgomery Street, Brooklyn 13, New York. Editors, Bob Silverberg and Saul Diskin. Published quarterly. 5c per copy. Mostly fiction and still improving.

VALHALLA, General Delivery, Oswego, Illinois. Editor, Arniece Curley. Published irregularly. No price listed. Mostly doings of so-called "young fandom."

WONDER, 8 Burfield Avenue, Loughborough, Leicestershire, England. Editor, Michael Tealby. Published every four months. 1/s per annum. Much flying disc stuff in this issue—with Charles Fort far from neglected in this connection. Interesting and unpretentious.

THE X-RAY, 1980 East 8th Street, Brooklyn 23, New York. Editor Ronald Friedman. Published monthly. 10c to non-members of Universal Musketeers. Mostly organization stuff for the above-mentioned military order or fandom.

Whew! What a workout. Well, if you chaps are willing to go to the work of assembling, printing and distributing the fanzines, the least we can do is review them to the best of our abilities. Please keep them coming! —THE EDITOR.

SCIENCE FICTION BOOKSHELF

REVIEWS OF NEW BOOKS

THE MARTIAN CHRONICLES by Ray Bradbury, Doubleday & Co., Inc., New York ($2.50).

To our doubtless limited way of thinking Mr. Bradbury has, in THE MARTIAN CHRONICLES, written the first modern novel in the field of science fiction-fantasy that promises to take its place within the frame of true literature.

For a number of years now the more

adult and discerning among readers of this and other magazines in which his short stories have appeared have been well aware of the unique savage fragility of Mr. Bradbury's talent. That it is unique upon the current writing scene has been recognized by editors and critics as well all the way from the pulps, through the slick magazines to those who have repeatedly selected his stories for the various annual "best" awards.

His preoccupation with the human effort to reach planets other than Earth—especially Mars—scarcely needs italicizing here. And in the CHRONICLES Mr. Bradbury has assembled the best of his Martian stories (including four which ran in our companion magazine, THRILLING WONDER STORIES) and with adroit chronological inserts and entre-chapters made of them a sort of record of man's first journeys to the red planet, his colonization and his abandonment of Mars, his final marooning there as he manages to destroy Earth.

It makes wonderful and terrible sense

[*Turn page*]

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somehow. For both members of the first expedition are destroyed by a Martian husband who is rightly jealous of his wife's boredom with the local scene. The second expedition meets a savagely ironical finish when the Martians consider them merely the illusions of madmen. And the third is eliminated through a marvellous illusory booby-trap created by the Martians themselves.

But still the Earthman come—noble, terrible, battling amongst themselves under the impact of their strange environment. Spender, the archeologist, goes mad and all but destroys the fourth expedition himself—all but. They replenish Martian agriculture, rear filling stations, encounter ghosts of Martians long since vanished in the traps of time. Children make xylophones of the ribs of dead Martians and a plethora of Earth-names are given the Martian sites.

A freedom-loving rich eccentric destroys the censors in a wonderfully macabre manner and a surviving Martian is destroyed by his very efforts to adjust to Earthfolk. Phantom ships appear, the return migration is on and Earth explodes in atomic holocaust. Derelicts live on in the ghost towns and the marvelous machinery begins to run down and then finally the only Martians left are those who escaped disaster on Earth and are left with but their will to survive.

It is, in its strange and colorful way, a singularly believable chronicle. For its people are uncannily real and its Martians are—well, uncanny. We hope this book has a vast popular success—if it does it will be a great boon for science fiction. If not we wish it the place in the literary firmament to which it has every right.

SEETEE SHOCK by Will Stewart. Simon and Schuster, New York ($2.50).

This is good swift space opera, complete with ideological overtones. In fact, despite its future setting, it reads a good deal like an embattled propaganda screed for the "liberal" of 1950—or perhaps of a generation ago.

In it we find blatant *laissez-faire* imperialism wrapped up in a big-business cartel carton assailed on an interplanetary scale by underprivileged interests. We even find that old debbil race prejudice raising its unpretty head as exemplified by the ex-

ploitation and social snobbery exercised by those born on planets against those raised on the ore-productive asteroids.

All of this makes for red-hot conflict, of which the volume is full. Primarily it concerns the existence of one Nick Jenkins, nephew and dupe of Martin Brand, fat cat of the atomic cartel. And Nick's existence is threatened with summary extinction due to burns received in a space-mining operation.

Nick decides, in the words of Red Barber, to tear up the pea-patch—and he does himself quite a job. Nub of the struggle is the matter of mining contraterrene or negative matter, the "seetee" of the title. There is also a girl, apparently working for the opposite side, in the best spy-melodrama tradition.

It's all good bang-bang stuff, ingeniously plotted and competently presented by the author. But sometimes we wonder if the issues and slogans will be the same a few generations hence. They were quite different a corresponding length of time in the past.

—THE EDITOR.

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THE ETHER VIBRATES

(Continued from page 154)

But on to one of the main reasons for this letter. I want to congratulate John MacDonald for his great story. No doubt it'll be made into a first class book. More of the same.

Here's a plea to separate the controversial letters and the story raters. I've got nothing against either one. In fact I like to read both kinds. But I like to read them at different times. Also less vivid covers, tone down the name of mag, and eliminate names of the stories on the cover. Water off a duck's back.

Here's a little thought on alien life. Some of your readers say that life cannot exist anyplace but on the Earth. I believe it can and does. Here's why.

First, let's assume that life is an energy which, of course, it is.

Now the other energies such as light, heat, electricity, etc., are reputed to exist on all the other worlds. In fact, no one denies their existence there. Then, if the others exist why not life? Isn't it one of the major elements that make up the forces of the universe?

One of the main reasons why we won't admit this is because man is a great egotist. Anything that goes to shatter that illusion is wrong. We conceive of curselves as something special. Something that could only happen once in an eternity. Look how long it took to make them believe that the earth revolved around the sun, not the sun around the earth. We don't like to accept anything that doesn't make us the center of attraction.

As for the odds against life on other planets, just look at the odds against man existing. It's well explained in the book HUMAN DESTINY. If those odds can be broken I guess the others can too.

It's quite an interesting subject that can bring much thought. We won't know who's right till we get there, but it's fun to exercise your imagination.—1215 East Main, Decatur, Illinois.

So now life is an energy. Okay, we'll go along with you to the extent of admitting its existence on planets other than earth. As for the letter-separation idea, use your own mixmaster. Brrrr!

NGLNK!
by Jack Marsh (not a Ph.D.)

Dear Old Ed: Much, much better was the illo for CHILDREN OF THE SUN than the Astarita for RETURN OF CAPTAIN FUTURE. But Orban still isn't as good as Wesso. And what is the dame doing in the beam with CF? Nglnk! Edmond Hamilton never mentioned a female in the world yarn (if I remember right).

Fiend! You know what I mean! On page 105,, May '50 STARTLING, upper right-hand corner! Simon Wright! UPSIDE DOWN! The same muddle-headed mistake was made by Sergeant Saturn 2 or 3 times in the old CAPTAIN FU-

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TURE mag (which SHOULD be revived). Simon ought to drop a jug of Saturn's Xeno on you!

How would you like to lose a few thousand admirers? Unless you get Ed Hamilton to make his Capt Future stories long again you probably will. Too much that could have been very good left out of CHILDREN OF THE SUN.

Why doesn't someone shoot the Ph.D.'s?

Jacobi's THE HISTORIAN gave me a laugh. Nglnk! Why wasn't the idea thought of sooner? The illo for it surprised me. I thought at first that TEV was now being illustrated.

Why doesn't someone electrocute the Ph.D.'s?

Since when have BEMs been made out of flame-spun glass?

Why doesn't someone hang the Ph.D.'s?

Don't ask me why, but for some reason the pic on pages 14-15 for WINE OF THE DREAMERS reminds me of A. Merritt's CREEP, SHADOW!

Why doesn't someone drown the Ph.D.'s?

Is James E. Hamilton, whose letter appeared on page 149 really a cousin to Edmond? Th' lucky dawg!

Why doesn't someone strangle the Ph.D.'s?

So you like letters like the one from LinID Carter occasionally, eh? Haw! Every goon in Fandom will probably write you 1 or 2, probably 3. (Yes, I know I'm a goon, but I'm a goon of another color [green & purple]. I have WEBBED FEETI)

Why doesn't someone poison the Ph.D.'s?

How come you left the BURROUGHS BULLETIN out of the Fanzine review? It useta be a slightly sloppy affair (in printing only; apologies to Vernell Coriell), but now it's a very neat, clear job similar to the BLOOMINGTON NEWS LETTER.—505 Vine St., Jonesboro, Ark.

We can only review what we receive, Jack. The Burroughs item has not been around of late. So that is the how of the coming. Apparently you have some sort of a grudge against all wearers of the PH. D. Don't let it run away with you.

And that would seem to be that for the nonce. See you next month in TWS. How come no poems this time?

—THE EDITOR.

Look Forward to

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